PRS-2121

AEP Model

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SOUND PROCESSOR

SPECIFICATIONS

Tuner section

Antenna	FM: 300 ohms balanced external antenna terminals 75 ohm unbalanced external antenna terminals AM: Loop antenna (built-in), external antenna terminals
Frequency range	FM: 87.5 – 108 MHz MW: 522 – 1602 kHz LW: 150 – 350 kHz
Sensitivity	FM: 3 μV (with S/N 30 dB) MW: 50 dB/m (with antenna provided) LW: 55 dB/m (with antenna provided)
Distortion	FM mono: 0.5% (1 kHz, 100% modulation) FM stereo: 1.0% (1 kHz, 100% modulation) MW/LW: 0.5% (400 Hz)
Stereo separation	More than 35 dB (1 kHz)

Cassette deck section

Track system	Compact cassette, stereo
Heads	Deck A: playback head ×1 Deck B: combination record/playback head ×1, erase head ×1
Motors	DC servo motors
Wow & flutter	0.05% W.RMS
Fast rewinding time	Approx. 95 sec. (using C-60 cassette)
Frequency response	(measured with Dolby NR OFF)
Deck A	TYPE IV cassette (SONY METALLIC): 20 – 16,000 Hz ±3 dB TYPE I cassette (SONY BHF): 20 – 12,000 Hz ±3 dB
Deck B	TYPE IV cassette (SONY METALLIC): 30 – 16,000 Hz ±3 dB TYPE II cassette (SONY UCX): 40 – 14,000 Hz ±3 dB TYPE I cassette (SONY BHF): 40 – 12,000 Hz ±3 dB

– Continued on page 2 –

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MICROFILM

SONY®

SERVICE MANUAL

S/N ratio

Cassette DOLBY NR switch	TYPE I (SONY BHF)	TYPE II (SONY UCX)	TYPE IV (SONY METALLIC)
▂ ON	61 dB	63 dB	65 dB
⊓ OFF	54 dB	56 dB	58 dB

Tape speed	4.8 cm/sec (PITCH CONTROL knob at center)
Distortion	1.0% (THD) with SONY METALLIC

Mixing section

Input terminals

Terminal	Terminal type	Number	Specified input level	Input impedance
CHANNEL 2 MIC L/R	Phone jack	2	−60 dB	Low impedance
CHANNEL 3 ATT/MIC/ INST/LINE	Phone jack	1	MIC : −60 dB ATT : −40 dB INST : −20 dB LINE : −10 dB	MIC : Low impedance ATT : Low impedance INST : 220 kΩ LINE : 47 kΩ
CHANNEL 4 ATT/MIC/ INST/LINE	Phone jack	1		

Reverberation time approx. 3 sec.

Graphic equalizer section

Center frequencies	63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz
Variable range	±10 dB

Amplifier section

Output power	20 W + 20 W (with 8-ohm load impedance, both channels driven)

Harmonic distortion 0.05% (with 1 W output)

Input terminals

	Type	Input sensitivity	Input impedance
PHONO	phono jack ×2	2.5 mV	47 k ohms
CD/AUX	phono jack ×2	250 mV	47 k ohms

Output terminals

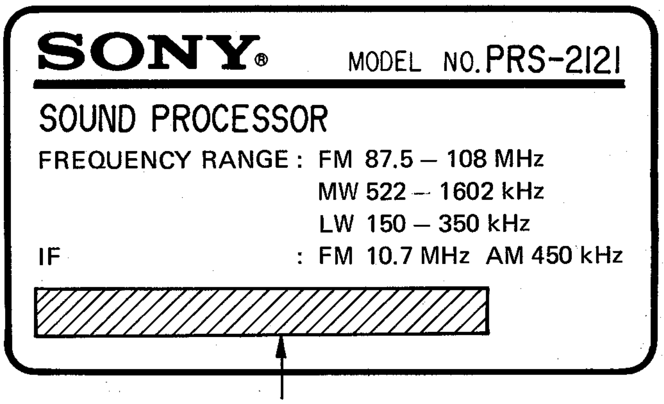
TAPE OUT (phono jack ×2)	Output voltage : 250 mV Output impedance : 1 k ohm
PRE OUT (phono jack ×2)	Maximum output voltage : 1 V Output impedance : 1 kohm
SPEAKERS	Matching impedance : 8 – 16 ohms
HEADPHONES (stereo phone jack ×2)	Load impedance : 8 ohms or more

Power supply section, others

Power supply	AEP Model: AC 220 V, 50/60 Hz UK Model: AC 240 V, 50 Hz
Power consumption	70 W
AC outlet	max. output 300 W (unswitched for AEP model)
Dimensions	Approx. 405 x 435 x 195 mm (w/h/d) (16 x 17$^1/_8$ x 7$^3/_4$ inches) including projecting parts and controls
Weight	Approx. 12.0 kg (26 lbs 8 oz) net

0dB = 0.775 V

Tape transport mechanism type	DECK A	TCM-130V4
	DECK B	TCM-130V5


SONY® MODEL NO. PRS-2121

SOUND PROCESSOR

FREQUENCY RANGE : FM 87.5 – 108 MHz
MW 522 – 1602 kHz
LW 150 – 350 kHz
IF : FM 10.7 MHz AM 450 kHz

AEP Model : AC 220V ~ 50/60 Hz 70W
UK Model : AC 240V ~ 50 Hz 70W

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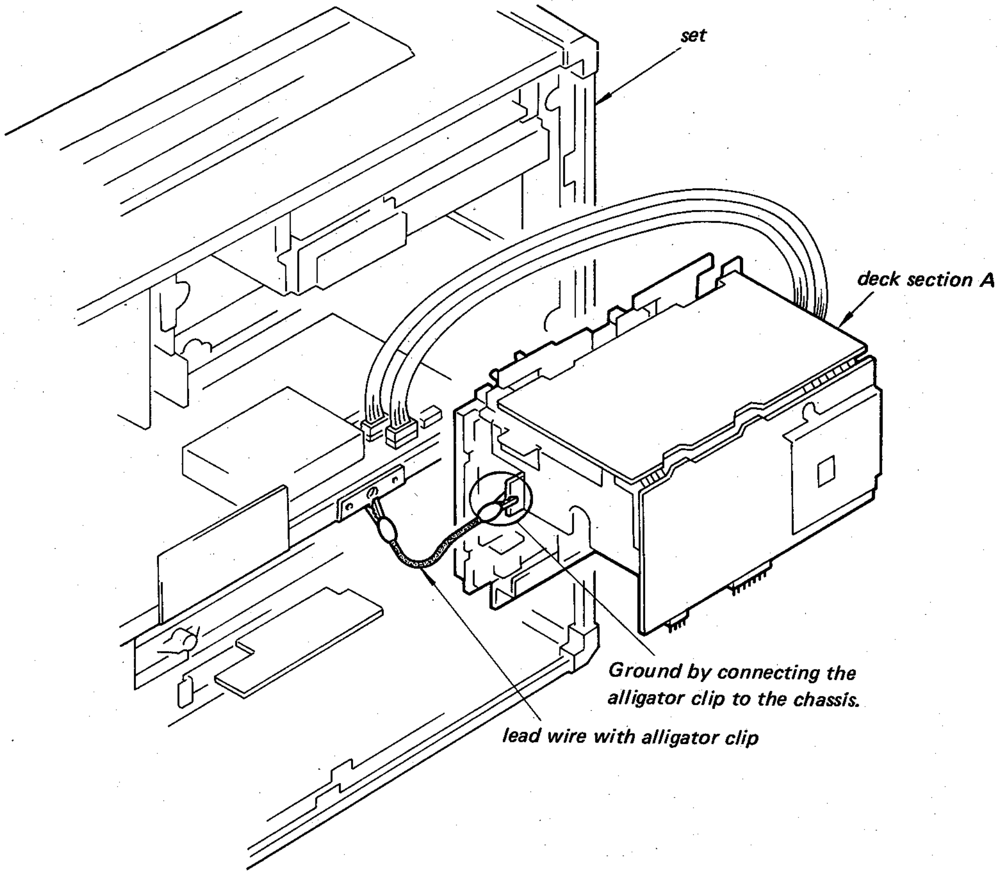
Notes on Repair

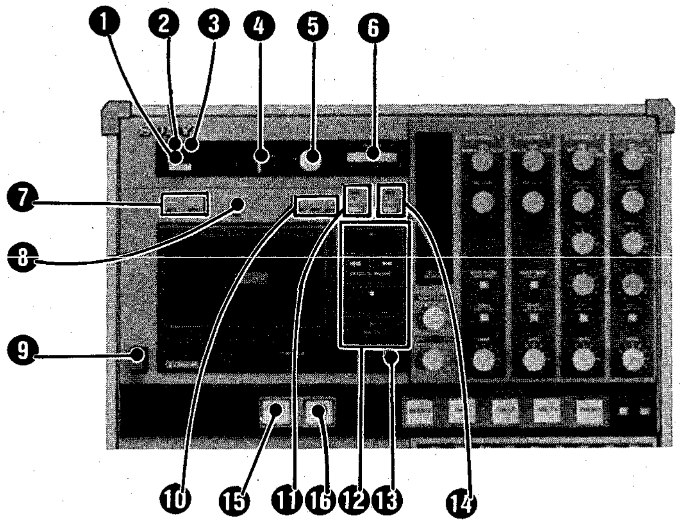
When checking operation or performing electrical adjustment with deck section A removed from the set, connect deck section A ground (chassis) to the set chassis as shown below. If this is not done, defective AMS operation and hum noise will result. Connect deck section B in the same way.


set
deck section A
Ground by connecting the alligator clip to the chassis.
lead wire with alligator clip

SECTION 1
OUTLINE

1-1. OPERATING INSTRUCTIONS

LOCATION AND FUNCTION OF CONTROLS



Tuner section

❶ **FM MODE selector**
Used for FM reception. See page 8.

❷ **STEREO indicator**
Lights up when an FM stereo program of sufficient signal strength is tuned in.

❸ **TUNED indicator**
Lights up when radio programs are correctly tuned in.

❹ **Dial scale and pointer**

❺ **Band selector**
Choose the desired band, FM, MW or LW.

❻ **TUNING knob**
Turn to select the frequency of the desired station. Turn toward [+] for a higher frequency and toward [–] for a lower frequency.

Deck A —for playback only

❼ **TAPE indicators**
The type of the tape being used is automatically detected by the automatic tape selector system and the corresponding indicator lights.

❽ **DOLBY* NR switch**
To play back a tape recorded with the Dolby NR (Noise Reduction) process, depress this switch (▭ ON).

❾ **⏏ (eject) button**
Press to open the cassette holder.

❿ **Music scan/AMS indicator**
During the music scan operation, indicates the number of seconds each selection will be played. During AMS operation, indicates the number of selections to be skipped.

⓫ **MUSIC SCAN button and indicator**
Press to start the music scan operation. The indicator will light.

⓬ **Tape operation mode select keys**
Each key operates with a light touch. It is possible to switch directly from one mode to another.

► (play) key
◄◄ (rewind) key
►► (fast forward) key
■ (stop) key: Press to stop the tape.
❚❚ (pause) key: Press to stop the tape momentarily. Press again to restart the tape.

⓭ **PITCH CONTROL knob**
Turn to adjust the speed of the tape on deck A.

⓮ **AMS button and indicator**
Press for AMS operation. The indicator will light.

⓯ **COPY A → B (tape dubbing) button**
Press this button to start the tape dubbing. The button flickers for several seconds and then the tape dubbing from the tape on deck A to the tape on deck B will start.

⓰ **PLAY A → B (continuous playback) button**
If you press this button, it will light and the playback of the tape on deck A will start. After tape on deck A is over, playback of the tape on deck B will start automatically.

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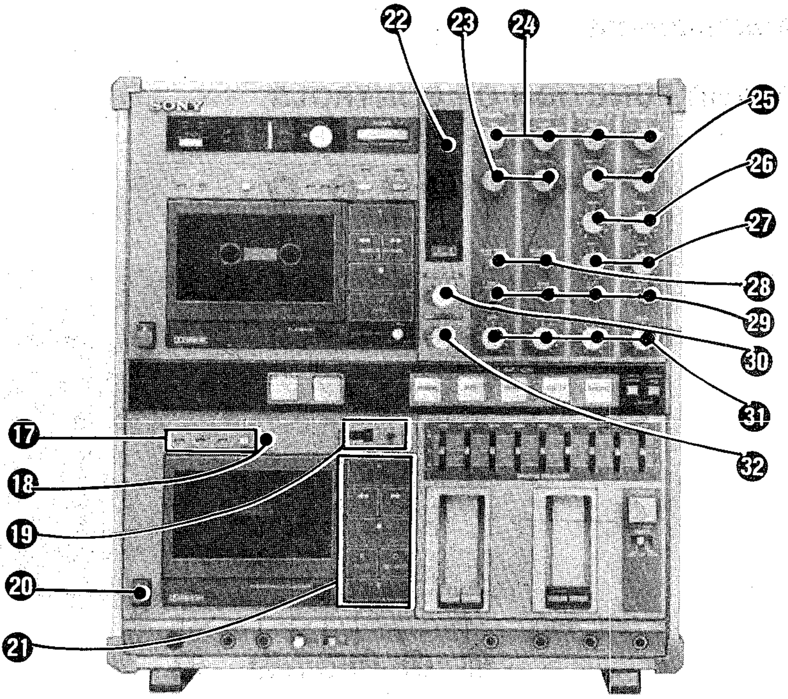


Deck B—for playback and recording

⑰ TAPE indicators and AUTO button
An indicator lights up according to the type of tape being used. When recording on a TYPE IV (METAL) cassette without the detector slot, depress the AUTO button.

⑱ DOLBY NR switch
To record with the Dolby NR process, depress this switch (▭ ON). To record without the Dolby NR process, press again and release this switch (□ OFF).
When playing back, set this switch to the same position used in recording.

⑲ Tape counter and reset button
For indexing tape contents. Before recording, set the counter to 000 by pushing the reset button and make a note of the figures and the program. Later on, the desired program can be rapidly located by using the ▶▶ (fast forward) or ◀◀ (rewind) key.

⑳ ⏏ (eject) button
Press to open the cassette holder.

㉑ Tape operation mode select keys
▶ (play) key
◀◀ (rewind) key
▶▶ (fast forward) key
■ (stop) key
PAUSE (pause) key: Press to stop the tape momentarily. Press again to restart the tape.
REC MUTE (record muting) key: Press to eliminate unwanted material. 4 seconds of interspacing is automatically provided.
REC (record) key: Keep this key pressed and press the ▶ key to record.

㉒ Level meter
Indicates the playback or recording level of the program source selected by the FUNCTION selectors.

Mixer section (See page 19 for details)

㉓ BALANCE controls
Turn to adjust the left and right speakers or headphones volume of the source selected in CHANNEL 1 or CHANNEL 2.

㉔ Source selectors
Select the mixing source.

㉕ PAN POT controls
These controls adjust the acoustical positioning of the microphones or program sources connected to the CHANNEL 3 or CHANNEL 4 jack between the left and right channel outputs.

㉖ TREBLE controls
Operate only for the program source selected in CHANNEL 3 or CHANNEL 4.

㉗ BASS controls
Operate only for the program source selected in CHANNEL 3 or CHANNEL 4.

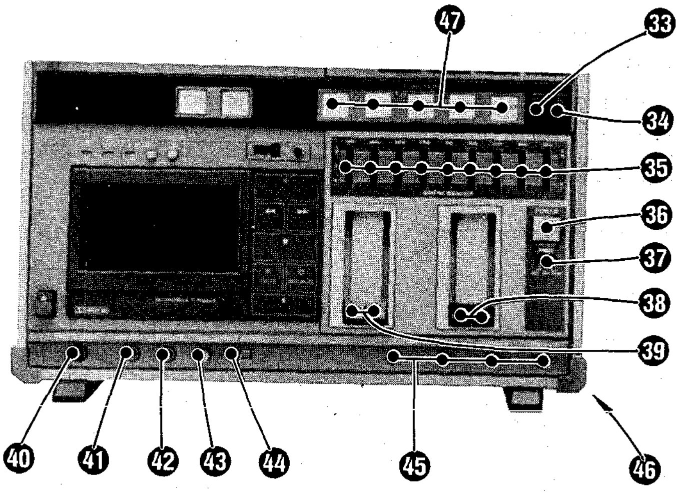
㉘ VOICE FADER switches
Depress to decrease the volume of the sound or the voice positioned at the center in CHANNEL 1 or CHANNEL 2.

㉙ ECHO switches
Depress to add an echo effect.

㉚ ECHO LEVEL control
Turn to adjust the echo level of the channel in which the ECHO switch is depressed.

㉛ LEVEL controls
Turn to adjust the volume of each channel.

㉜ MASTER LEVEL control
Turn to adjust the volume of the mixed sound.



Graphic equalizer section

㉝ SPACE SOUND switch
Depress this switch (▭ ON) to add depth and spaciousness to the original sound. This switch is useful when the stereo image is diminished because your speakers are too close together or your listening room is small.

㉞ EQ (equalization) switch
Depress this switch (▭ ON) to add the designated equalization value. To cut out the equalization value, press the switch again (□ OFF) so that the equalizer circuit is bypassed.

㉟ Equalizer controls
Slide downwards or upwards to equalize the signal.

Amplifier section and general

㊱ POWER switch
Depress to turn the power on (▭ ON). Press again to release it (□ OFF).

㊲ TIMER switch
You can set the unit to record or play back at a predetermined time by connecting any commercially available timer. To record, set this TIMER switch to REC. To play back a tape, set it to PLAY. See page 16.

㊳ MASTER VOL controls
Slide to adjust the volume of the speakers or the headphones connected to the HEADPHONES 1 jack.

㊴ REC LEVEL controls
Slide to adjust the recording level of manual recording on the deck B.

㊵ REMOTE (remote control) jack
Connect the optional RM-50 or RM-51 remote control unit to operate the deck B from a distance. Synchronized operation is also possible with selected Sony turntables, using the optional RM-65 synchro remote control unit.

㊶ HEADPHONES 1 jack (stereo phone jack)
Connect a pair of headphones to listen to the source selected with the FUNCTION selector.

㊷ HEADPHONES 2 jack (stereo phone jack)
Connect a pair of headphones to listen to the source selected with the FUNCTION selector or the tape on the deck A, whichever is selected by the TAPE A/SOURCE selector. The sound of the speakers will not be cut off.

㊸ LEVEL control
Turn to adjust the level of the headphones connected to the HEADPHONES 2 jack, or the source connected to the PRE OUT jacks.

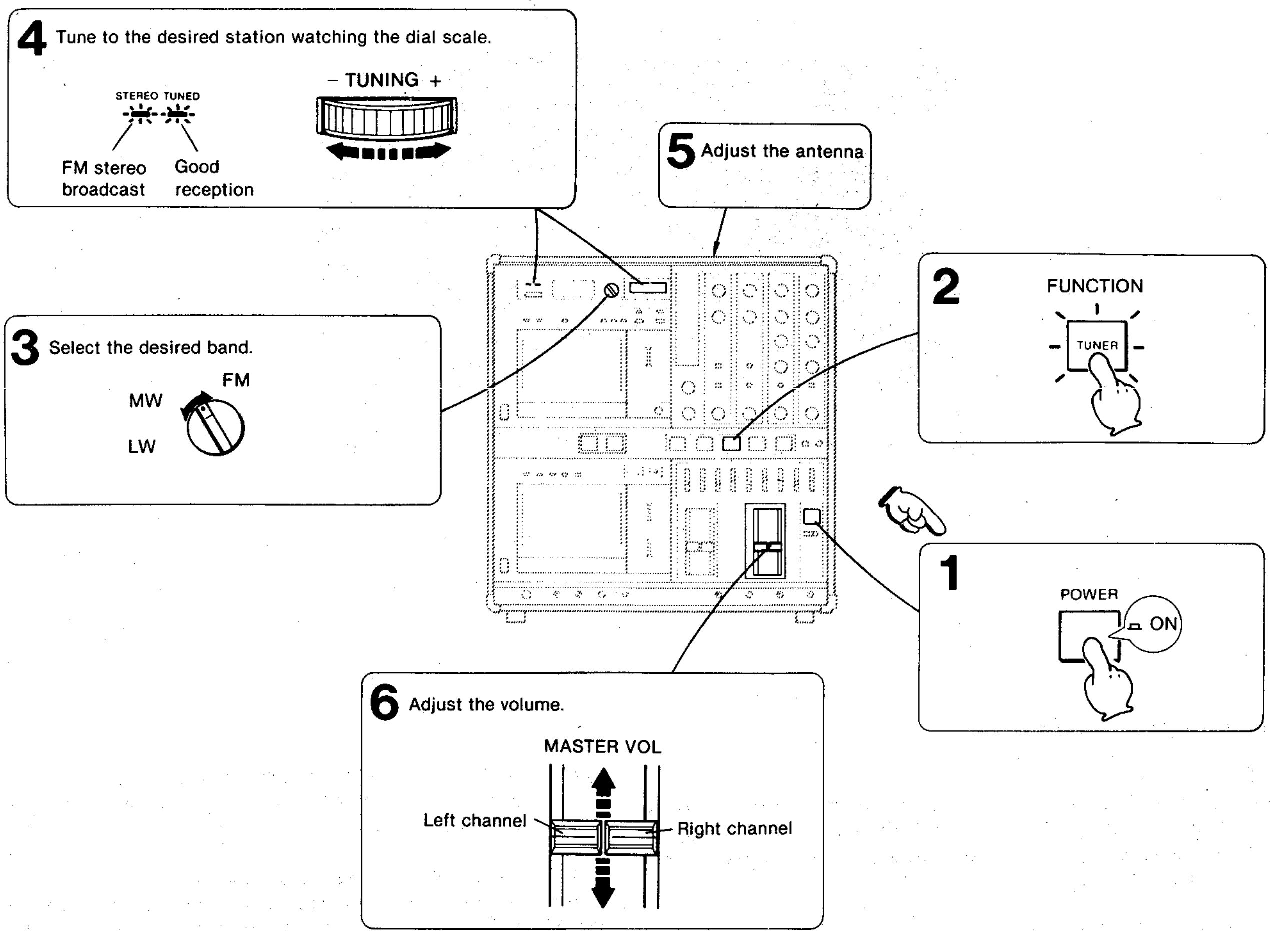
㊹ TAPE A/SOURCE selector
TAPE A: to listen to the sound of the tape on the deck A.
SOURCE: to listen to the source selected with the FUNCTION selector.

㊺ Mixing microphone input jacks (phone jacks)
CHANNEL 2 (MIC) L/R: for connecting a one-point stereo microphone or two monaural microphones.
CHANNEL 3, 4: for connecting a monaural microphone.

㊻ ISS (Interference Suppress Switch) (rear)
Used for MW or LW program recording. See page 15.

㊼ FUNCTION selectors
Select the program source.

LISTENING TO RADIO PROGRAMS


4 Tune to the desired station watching the dial scale.

5 Adjust the antenna

3 Select the desired band.

2

1

6 Adjust the volume.

FM MODE selector and indicator
This selector serves the dual purpose of a mode and FM muting switch.
Normally keep this selector released to eliminate FM interstation noise while tuning from station to station. The sound processor operates in stereo mode for stereo sound sources and will be automatically switched to mono mode for monaural sound sources.

When you want to tune in a very weak station, or when an FM program is too noisy, depress the selector. This will enable the sound processer to receive weak stations, although the stereo feature is sacrificed. In this case, keep the volume down to avoid speaker damage caused by the interstation noise.

Station markings on the LW dial scale

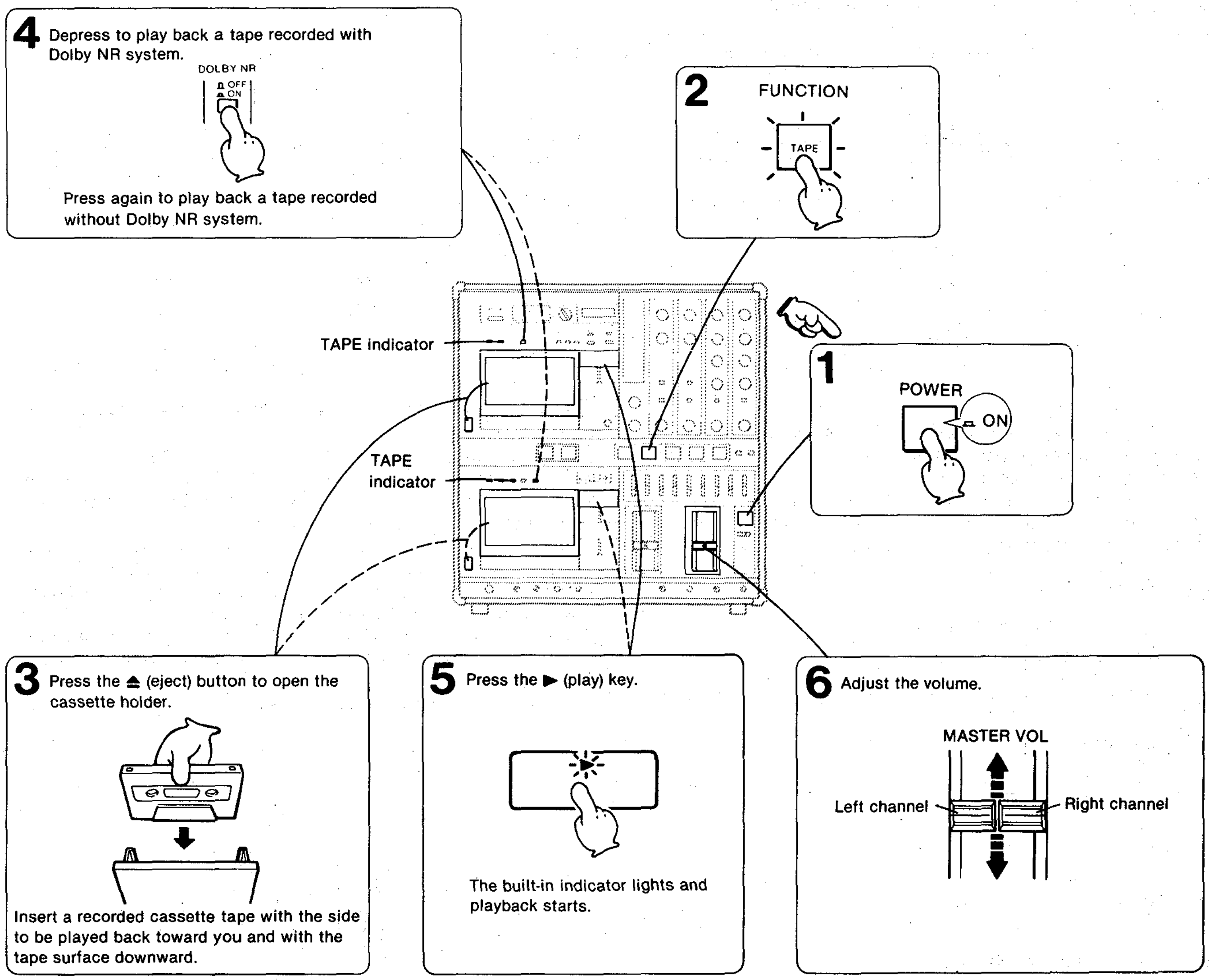
LW STATION

marking	station	frequency
DLF	Deutschlandfunk	155 kHz
FI	France inter	164 kHz
E1	Europe 1	182 kHz
BBC	British Broadcasting Corporation	200 kHz
RMC	Radio Monte Carlo	218 kHz
RTL	Radio télévi. Luxembourg	236 kHz
RTA	Radio télévi. Algérienne	254 kHz

LW WIRE BROADCASTING (for Switzerland only)

marking	program	frequency
1	Program 1	175 kHz
2	Program 2	208 kHz
3	Program 3	241 kHz
4	Program 4	274 kHz
5	Program 5	307 kHz
6	Program 6	340 kHz

LISTENING TO TAPES



4 Depress to play back a tape recorded with Dolby NR system.

Press again to play back a tape recorded without Dolby NR system.

2 FUNCTION

1 POWER

3 Press the ≜ (eject) button to open the cassette holder.

Insert a recorded cassette tape with the side to be played back toward you and with the tape surface downward.

5 Press the ▶ (play) key.

The built-in indicator lights and playback starts.

6 Adjust the volume.

DOLBY NR
OFF
ON
TAPE
TAPE indicator
TAPE indicator
ON
MASTER VOL
Left channel
Right channel

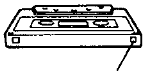
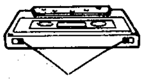
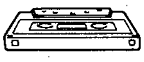
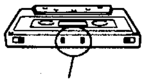
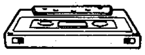
To stop the tape, press the ■ (stop) key.
To advance the tape rapidly or to rewind the tape, press the ▶▶ (fast forward) key or ◀◀ (rewind) key.
When both decks A and B are set to playback mode, the signal from deck B has priority.

PITCH CONTROL
With the PITCH CONTROL knob, the tape speed of deck A can be changed. When the knob is turned toward the (+) side, the tape speed increases. When the knob is turned toward the (–) side, the tape speed decreases. For the normal operation, set the knob to the center detent position.

PITCH CONTROL
–
+

AUTOMATIC TAPE SELECT SYSTEM

The automatic tape select system is actuated by the detector slots of certain cassettes and automatically sets the optimum recording and playback characteristics.
The tape type detected will be shown by the indicator.

	TYPE I (NORMAL) cassette	TYPE II (CrO2) cassette	TYPE III (Fe-Cr) cassette	TYPE IV (METAL) cassette	
Tape detector slots	 the tab	 CrO2 tape detector slots	 same as the TYPE I cassette	 METAL tape detector slots	 METAL tape which has no METAL tape detector slots
Tape type indicator	TYPE I NORM	TYPE II CrO2	TYPE I NORM	TYPE IV METAL	TYPE II CrO2

Notes

- TYPE III (Fe-Cr) tapes are treated as TYPE I (normal) tapes.
The recording characteristics differ slightly from normal recordings, but there is no major problem.
- To record or metal tapes without detector slots, depress the AUTO button located above deck B. The built-in equalizer operates and the optimum recording characteristics can be obtained.

Tape list

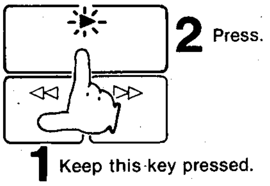
Tapes (C-60 and C-90)		Tape type
SONY : AHF, BHF, CHF BASF : LH-X, Professional I MAXELL : UD, UD-XL, XL I-S SCOTCH : MASTER I	AGFA : SUPER FERRO DYNAMIC FUJI : FX-I PHILIPS : SUPER FERRO-I TDK : AD	TYPE I (NORMAL)
SONY : UCX, UCX-S, CD-α BASF : Professional II MAXELL : UD-XLII, XLII-S SCOTCH : MASTER II	AGFA : STEREO CHROM FUJI : FX-II PHILIPS : CHROMIUM TDK : SA, SA-X	TYPE II (CrO_2)
SONY : FeCr BASF : Professional III SCOTCH : MASTER III	AGFA : CARAT PHILIPS : FERRO CHROMIUM	TYPE III (Fe-Cr)
SONY : METALLIC	Other metal tapes	TYPE IV (METAL)

All-mode shut-off mechanism

When a tape is entirely wound in any operating mode, the engaged mode will be shut off automatically and the indicators will go off.

AUTO PLAY MECHANISM

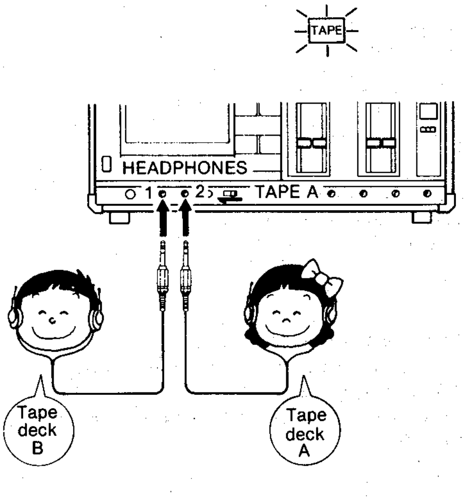
When rewinding the tape,



When the tape is completely rewound, playback starts automatically.

FOR TWO PEOPLE TO LISTEN TO DIFFERENT PROGRAMS WITH HEADPHONES

With headphones connected to the HEADPHONES 1 jack, the source program selected with the FUNCTION selector can be heard. The volume can be adjusted with the MASTER VOL controls. The sound from the speakers is shut off.
To listen to sound through headphones connected to HEADPHONES 2 jack, select the program source with TAPE A/SOURCE selector. When the selector is set to TAPE A, the tape played back on deck A can be heard. When the selector is set to SOURCE, the program source selected with the FUNCTION selector can be heard (same signal as HEADPHONE 1 jack). To adjust the volume, use the LEVEL control.
For example, when both decks A and B are used to play back tapes.



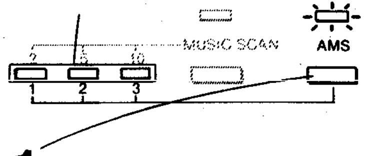
With the TAPE button depressed, deck B has priority over deck A and the tape played back on deck B can be heard through the headphones connected to the HEADPHONES 1 jack. The tape on deck A selected with TAPE A/SOURCE selector can be heard via the headphones connected to the HEADPHONES 2 jack.

TO LOCATE SELECTIONS

Operate the AMS or music scan function of deck A and press the ▶▶ or ◀◀ key. The deck now detects blank sections between selections and the desired selection can be easily found.

AMS function

With this function, a specified number of selections (max. 3) can be skipped and playback starts from the beginning of the desired selection.



2
5
10
MUSIC SCAN
AMS
1
2
3

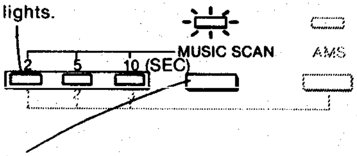
The indicator showing number of selections to be skipped lights.

Lights when the AMS button is pressed.

1 Press the AMS button to determine the number of selections to be skipped (see page 12). Each time the AMS button is pressed, tne number of selections to be skipped is increased by one.
After 3, the indication reverts to 1.

Music scan function

With this feature, only the beginnings of the selections are played back, very useful for quick identification.

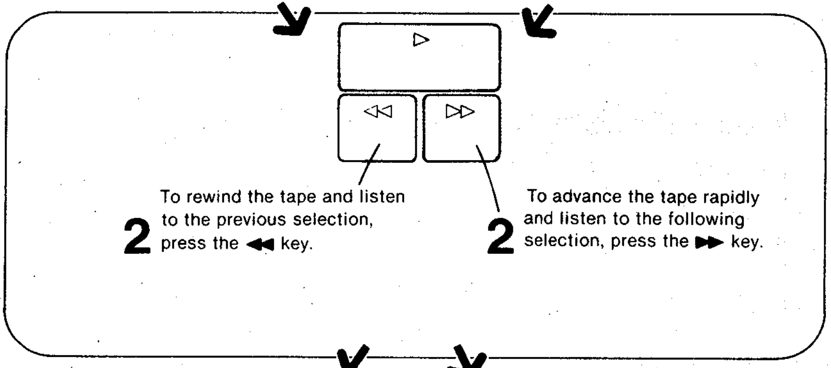


2
5
10 (SEC)
MUSIC SCAN
AMS

The indicator showing the number of seconds each selection is to be played back lights.

Lights when the MUSIC SCAN button is pressed.

1 Press the MUSIC SCAN button to determine the number of seconds each selection is to be played back.
Each time the MUSIC SCAN button is pressed, the playback time increases. After 10, the indication reverts to 2.

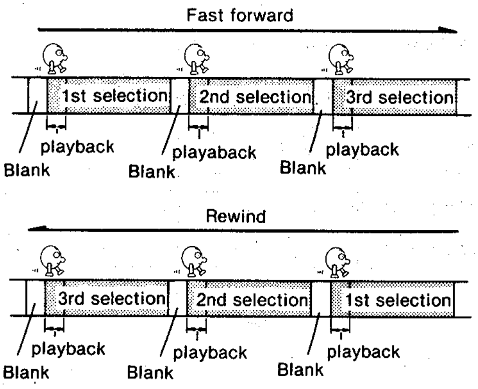


2 To rewind the tape and listen to the previous selection, press the ◀◀ key.

2 To advance the tape rapidly and listen to the following selection, press the ▶▶ key.

When the tape reaches the beginning of the desired selection, playback starts.

The beginnings of selections are played back up to the end of the tape for the specified number of seconds.



Fast forward
1st selection
2nd selection
3rd selection
playback
playayback
playback
Blank
Blank
Blank
Rewind
3rd selection
2nd selection
1st selection
playback
playback
playback
Blank
Blank
Blank

When the desired selection is found, press the ▶ key.
The music scan is released and the deck enters the normal playback mode.

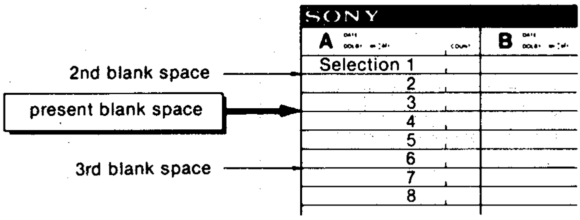
Notes on AMS and music scan

- When the music scan/AMS indicator lights, pressing the ▶▶ or ◀◀ key will set the unit to the cue or review mode.
- Since the AMS and music scan work by searching out the blank spaces on a tape, they may not operate if there is noise in the space between selections, or if the space is less than 4 seconds long. The record muting facility of this sound processor can make a 4-second blank space that will assure the AMS and music scan operation on any recorded tape.
- If the record music includes a long pause, or if it continues for a time at sufficiently low volume, as may happen for instance with classical music, or if any selection is less than 20 seconds long, the AMS and music scan will treat it as a blank.
- If you press the ◀◀ key about 15 seconds after a selection has started to play, playback will begin from the beginning of the selection just before the desired one. If you press the ▶▶ key about 15 seconds prior to the end of a selection, playback will begin from the beginning of the selection just after the desired one.
- When the tape is rapidly advanced with the music scan function activated, the same section is sometimes played back repeatedly. If this happens, keep the ▶▶ key pressed so that the unit enters the cue mode and release the key when the tape passes the section that was repeated. The music scan functions from the next selection.

How to count the blank spaces

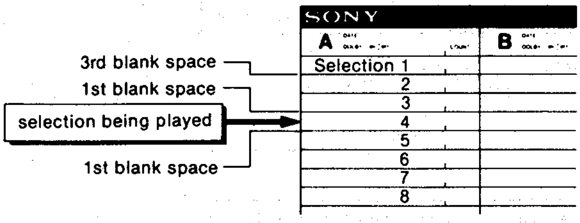
The number to be set in the AMS indicator by pressing the AMS button is the number of blanks from the present position to the blank preceding the desired selection.

Example 1: Operating AMS from a blank space



If you want to listen to Selection 2, press the AMS button until indicator 2 lights, then press the ◀◀ button.
If you want to listen to Selection 7, set the number "3" and press the ▶▶ key.

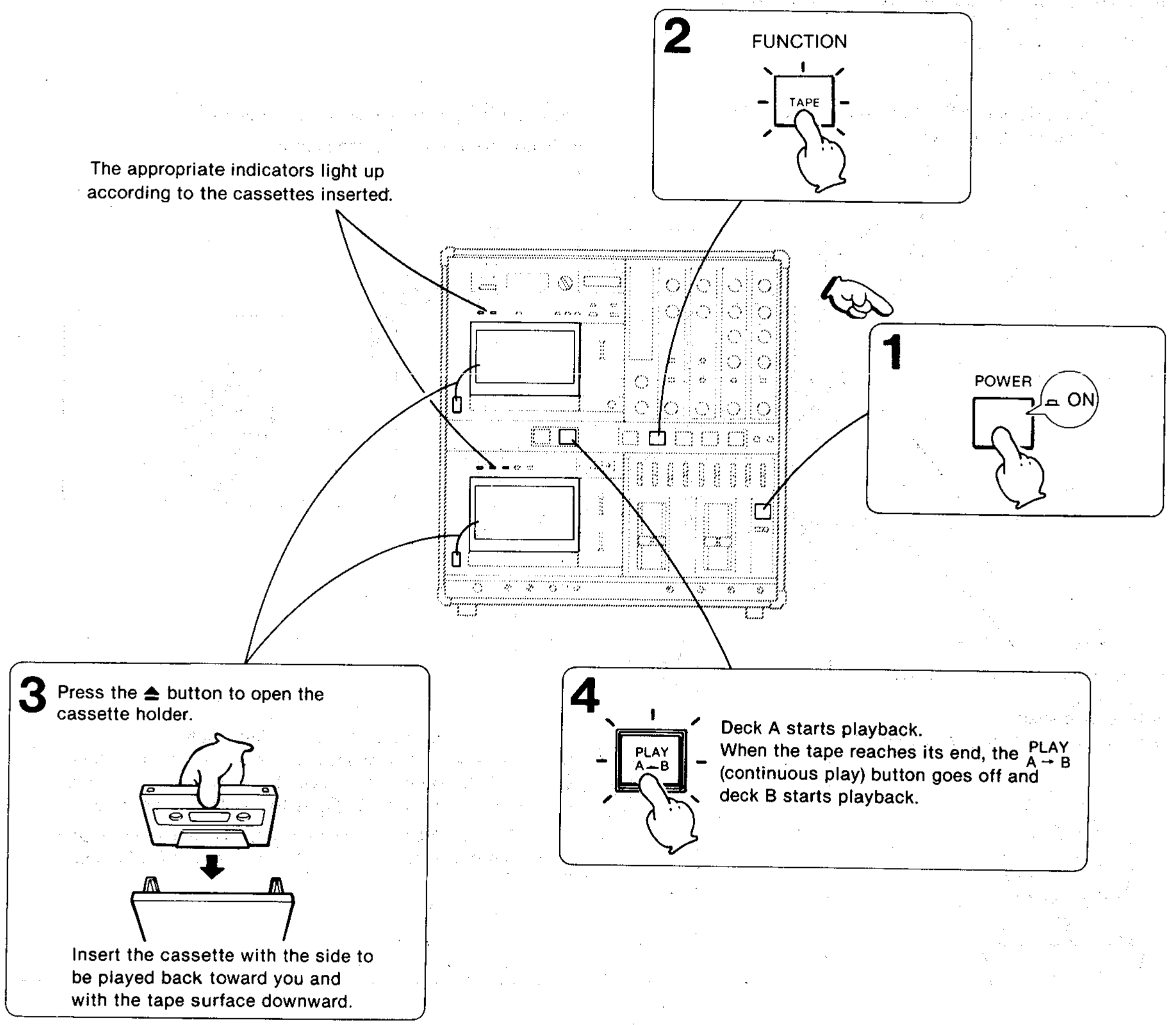
Example 2: Operating AMS from the middle of a selection



If you want to listen to Selection 2, press the AMS button until indicator 3 lights, and press the ◀◀ key.
If you want to listen to Selection 4 from the beginning, set the number "1" and press the ◀◀ key.
If you want to listen to Selection 5, press the AMS button until indicator 1 lights, and press the ▶▶ key.

You can change the number of the selection to skip while operating AMS just by pressing the AMS button.

TO PLAY BOTH DECKS CONTINUOUSLY



The appropriate indicators light up according to the cassettes inserted.

1

2

3 Press the ≜ button to open the cassette holder.

Insert the cassette with the side to be played back toward you and with the tape surface downward.

4 Deck A starts playback.
When the tape reaches its end, the PLAY A→B (continuous play) button goes off and deck B starts playback.

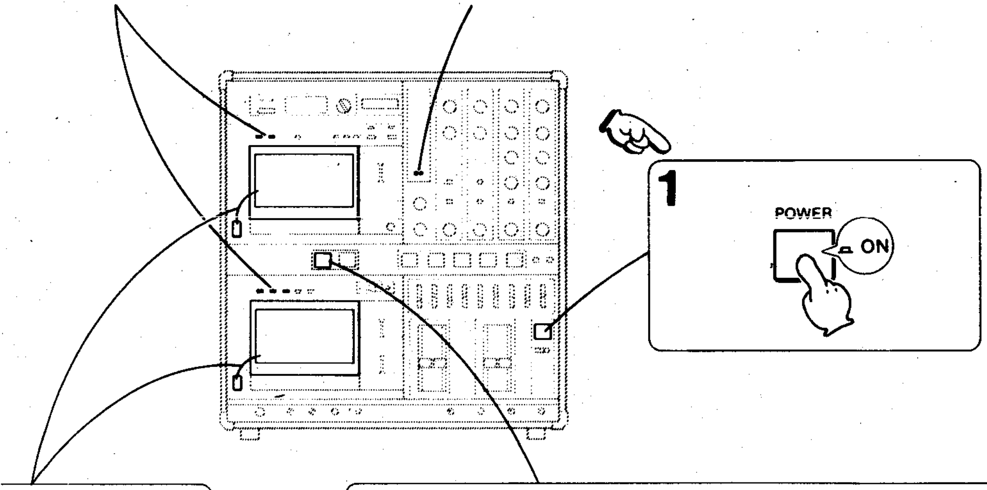
When the PLAY A→B button is pressed without a cassette in deck B, the tape in deck A is rewound when it reaches the end and the same side is played back again.
When the PLAY A→B button is pressed without a cassette in deck A, playback will not start.

TO COPY TAPES

To copy the tape played back by deck A directly onto the tape in deck B.

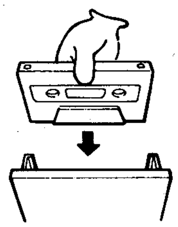
The appropriate indicators light according to the cassettes inserted.

When the COPY A→B button is pressed, the built-in indicator flashes until copying starts.



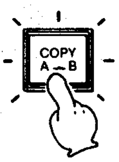
2 Press the ≜ button and insert the cassettes.

Deck A : Cassette to be copied
Deck B : Cassette on which the copy is to be made



Insert the cassette with the side to be played back or recorded toward you and with the tape surface downward. Before pressing the COPY A→B (dubbing) button, both tapes should be in the required positions.

3



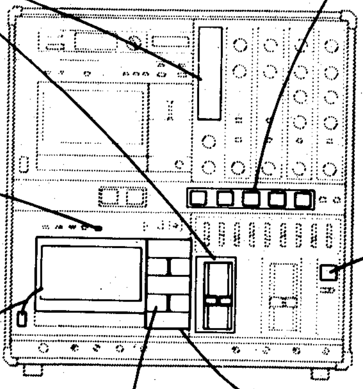
Flashes for about 4 seconds, then lights.
Deck A starts playback and deck B starts recording simultaneously. To suspend dubbing during 4 second period, press the COPY A→B button while it is flashing.

To stop dubbing, press the COPY A→B button again or press the ■ key of deck B ; both decks A and B will stop.

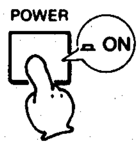
Tape dubbing is possible irrespective of the FUNCTION selector setting. The signal to be recorded is not affected by the setting of the DOLBY NR switches, REC LEVEL controls, SPACE SOUND switch or equalizer controls. This means a program source other than tape can be heard or the dubbed sound can be heard with equalization during dubbing.
At this time, the level meter indicates the signal levels of the program source selected by the FUNCTION selectors.

To make your own original tapes using the graphic equalizer, record the tape in the manual recording mode (see page 15).

MANUAL RECORDING—deck B



1



2 Depress the FUNCTION selector corresponding to the program source to be recorded; the selected program will be heard and the appropriate button will light.

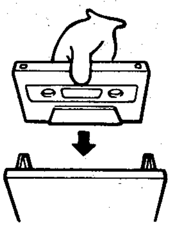
TAPE Tape loaded in deck A

TUNER Broadcast being received

CD/AUX The sound of a Compact Disc player or auxiliary component connected to the CD/AUX jacks

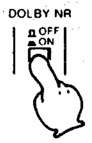
PHONO Record played on the turntable connected to the PHONO jacks

3 Press the ⏏ button and insert a cassette.



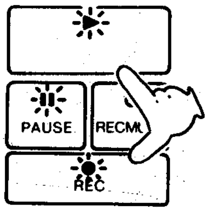
Insert a cassette with the side to be recorded toward you and with the tape surface downward.

4 Depress the DOLBY NR switch to switch on the Dolby NR circuit.

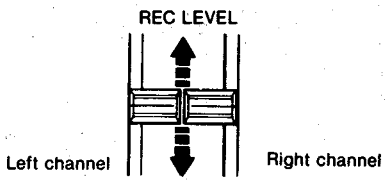


Press again to release when recording without Dolby NR system.

5 Press the ‖ PAUSE key and press the ▶ key keeping the ● REC (record) key pressed. The indicators in the keys will light.



6 Set the recording level using the level meter. (See "Setting the recording level" on page 16)



7 To start recording, press the ‖ PAUSE key.

To listen to the sound without recording, only operations 1 and 2 are necessary. The sound from the speakers can be adjusted with the MASTER VOL controls.

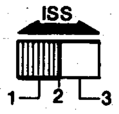
The sound being recorded can be enhanced using the graphic equalizer or SPACE SOUND function. (For details on the use of the graphic equalizer, see page 17).

The Dolby NR system reduces tape hiss and improves the signal-to-noise ratio. During recording, low-level high-frequency signals, which tend to be obscured by tape hiss, are boosted so that they are audible above any tape noise. When these signals are played back, the level is lowered to the original input level so that the level of any tape noise is reduced to the same extent.

If a tape recorded with Dolby NR is loaded in deck A, the copy will be identical, without you having to switch Dolby NR of deck B on. When the tape is played back, Dolby NR should be switched on.

ISS (interference suppress switch).

If interference is encountered while recording MW or LW programs, use the ISS switch at the rear to suppress the interference. Slide the switch to 1, 2 or 3 position, depending on which best reduces the noise.



RECORDING LEVEL ADJUSTMENT

When deck B is in recording mode, the RECORDING indicators light and the level meter shows the recording level, except when copying tapes using the COPY A→B button. To record the sound at the optimum level, adjust the REC LEVEL controls so that the red indicators deflect as close as possible to the 00 mark at the highest signal level passage of the program you want to record. The red indicators may go beyond the 00 mark for an instant at sudden high level bursts, but this is not a problem.

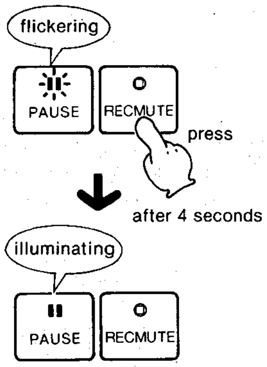
With both decks in pause mode, when pause is released for deck B, it is automatically released for deck A so that starting is synchronized. The pause function of both decks are controlled from deck B. To stop recording, press the ■ keys of both decks.

RECORD MUTING—deck B

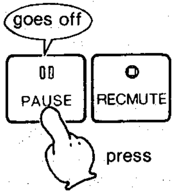
By pressing the REC MUTE (record muting) key during recording, four seconds interspacing is provided automatically, eliminating unwanted program material such as broadcasting commercials.

While the record muting is operating, the incoming signal is not recorded on the tape but it continues to register on the meters and feed to the monitor so that you know exactly what is going on.

1 Press the REC MUTE key when the segment you do not want to record begins. The indicator of the PAUSE key will blink, and the tape path will pause automatically after four seconds.



2 When you want to resume recording, press the PAUSE key.

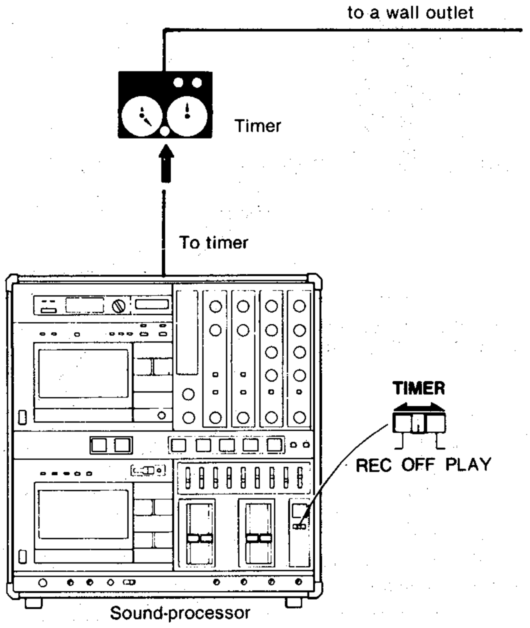


To insert a blank more than four seconds long

Keep the REC MUTE key pressed for as long as you want the blank segment on the tape to be. After four seconds, the indicator of the PAUSE key will blink more rapidly. When you release the REC MUTE key, the tape deck will be in the pause mode. When you want to resume recording, press the PAUSE key to release the pause mode.

TIMER-ACTIVATED RECORDING AND PLAYBACK

By connecting any commercially available timer to the sound processor, the deck can be set to play back or record mode automatically at any desired time. As timers work in different ways, be sure to read the timer's instruction manual carefully.



To record a broadcast using a timer

1 Connect the sound processor and timer. Set the timer so that power is supplied to the connected equipment.
2 Turn on the sound processor and tune in the station which will broadcast the program you want to record.
3 Set the TIMER switch to OFF.
4 Insert a cassette in deck B. Make sure that the tab is intact or that plastic tape covers the tab slot.
5 Adjust the recording level.
6 Set the timer for the desired time. (At this point power to the connected equipment will be cut off.)
7 Set the TIMER switch to REC.
The sound processor is now ready to start recording at the time set on the timer.

To play back using a timer

The connections between equipment are the same as for recording using a timer.

1 Set the TIMER switch to OFF.
2 Insert the recorded cassette.
3 Set the timer for the desired time. (At this point power to the connected equipment will be cut off.)
4 Set the TIMER switch to PLAY. The sound processor is now ready to start playback at the time set on the timer.

Note

The TIMER switch will function properly only if the sound processor is turned on **after** the switch is set to REC or PLAY. Do not change the setting of the TIMER switch during the four second stand-by period immediately after the power is turned on. If you want to change the setting of the switch, turn the power off first.

HOW TO EQUALIZE

To add the designated equalization value to the program sources, use the GRAPHIC EQ (equalization) switch.

How to adjust the equalizer controls
First set all controls at their center position, and then slide the control of the frequency band to be equalized gradually upwards or downwards until you perceive an apparent improvement. If the adjustment doesn't produce the anticipated improvement, return the control to the center position.

63 Hz control
Slide downwards to cut the ventilation noise of a music hall, hum of electronic instruments, boomy base, etc.
Slide upwards to reinforce the heavy bass part of a pipe organ or to add depth to the bass sound.

125 Hz control
Use this control to boost or cut the normal bass in a piece of music.

250 Hz control
This control governs the low-middle range and greatly influences the overall characteristics of the sound.

500 Hz control
This control adjusts the middle-frequency range—the human voice and the middle frequencies of instrumental music.
Slide upwards to increase the power, spaciousness and warmth of the sound.

1 kHz control
Use this control to provide more presence for vocals. The adjustment of this frequency band can move the sound forward, or into the background.

2 kHz control
This frequency band contains sounds which if not properly balanced can be very irritating. Slide downwards to reduce stridency; slide upwards to obtain a brighter brass sound.

4 kHz control
Use this control to adjust the brightness of sound.

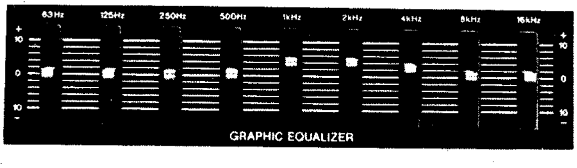
8 kHz control
Adjust this control so that the sound from a violin is silky smooth.

16 kHz control
This control adjusts the general atmosphere rather than the sound itself. Slide upwards to highlight the delicate quality of instrumental sound and downwards to reduce high-frequency noise, such as the resonant peak of a cartridge, tape hiss, etc.

EXAMPLES OF EQUALIZER CONTROL SETTINGS

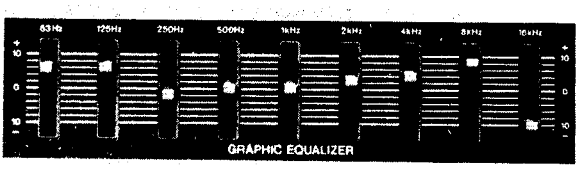
Reproduced sounds are greatly affected by room acoustics, speakers and speaker placement. There is no rule for correct equalizer control settings. The following are examples of how the equalizer controls might be set to achieve various results.

To provide more presence for female vocals



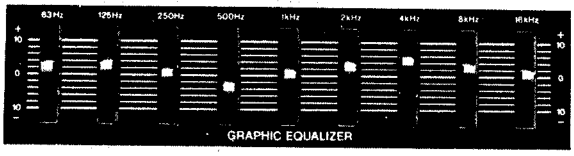
The fundamental frequency of female vocal is around 1 kHz. Slide the 1 kHz and 2 kHz controls toward +4. The vocal sound moves forward. To add more brightness to the sound, slide the 4 kHz control toward +2.

Recording tapes to be played back using a Walkman



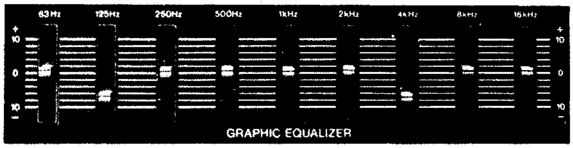
To boost low frequency sound, slide the 63 Hz and 125 Hz controls upwards. So that middle/high frequency sound is more dynamic, slide the 4 kHz and 8 kHz controls upwards.
To make the sound easy to listen to, slide the 16 kHz control downwards.

To record FM broadcasts with brighter sound



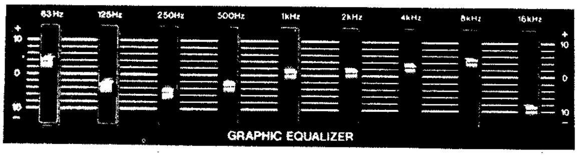
To enhance low frequency sound, slide the 63 Hz and 125 Hz controls upwards. For improved middle/high frequency sound, slide the 2 kHz, 4 kHz and 8 kHz controls upwards - this will improve high frequency response. For a more balanced sound, slide the 500 Hz control downwards.

To eliminate howling



The frequency at which acoustic feedback (howling) occurs differs depending on the microphones used. In many cases, sliding the 125 Hz and 4 kHz controls downwards will eliminate howling.

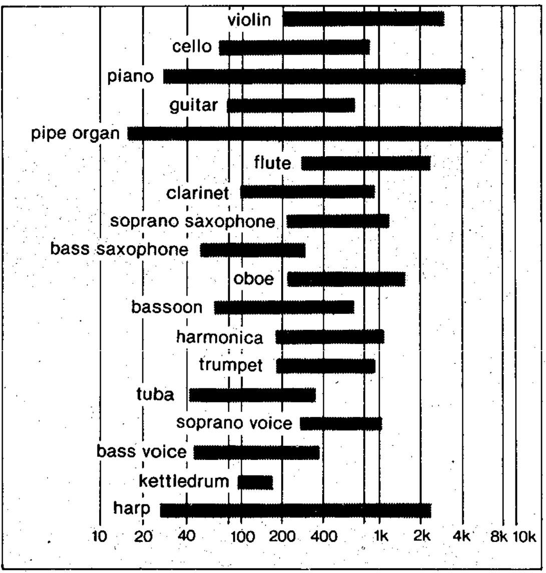
To equalize a tape for a car stereo



Slide the 63 Hz upwards to emphasize the bass of the compact speaker. Also slide the 4 kHz and 8 kHz up ward and the 16 kHz down to cut down the extremely high frequencies. In a car, middle and low frequencies can cause a muffled sound. To brighten the sound, slide the controls around 250 Hz downwards.

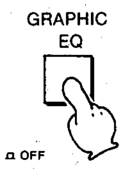
Fundamental frequency range of standard instruments

The following chart, adapted from Olson, shows the fundamental frequency range of standard instruments. Refer to it when adjusting the equalizer controls.



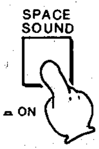
TO CHECK EQUALIZATION RESULTS

Press the EQ (equalizer) switch again to disengage it. The equalizer circuit is bypassed and you can monitor the non-equalized original sound. Check the equalization results by comparing the equalized sound with the original sound, using the EQ switch.



SPACE SOUND switch

Depress this switch (⊓ ON) to give the effect of a more expansive, surrounding sound. This switch is useful when the speakers are placed too close together or your listening room is small and diminishes the stereo sound stage.

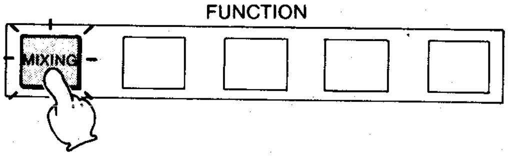


MIXING

The sounds from pre-recorded tapes, musical instruments, vocals, records, etc. can be mixed so that you can enjoy original entertainment that you have created yourself.

BEFORE STARTING MIXING

Depress the MIXING button ; this switches on the mixer section.



Mixing source selectors

CHANNEL 1

PHONO : Record played on the turntable connected to the PHONO jacks at the rear

TAPE : Tape played by deck A or B

CD/AUX : Sound from the component connected to the CD/AUX jacks

CHANNEL 2

MIC L/R : Sound from the microphone connected to the CHANNEL 2 (MIC) jacks at the bottom of the front panel.

TAPE : Tape played by deck A or B.

TUNER : Broadcast received by the built-in tuner.

CHANNELs 3 and 4

Use when a microphone or musical instrument is connected to the CHANNEL 3 or CHANNEL 4 jack of the front panel.

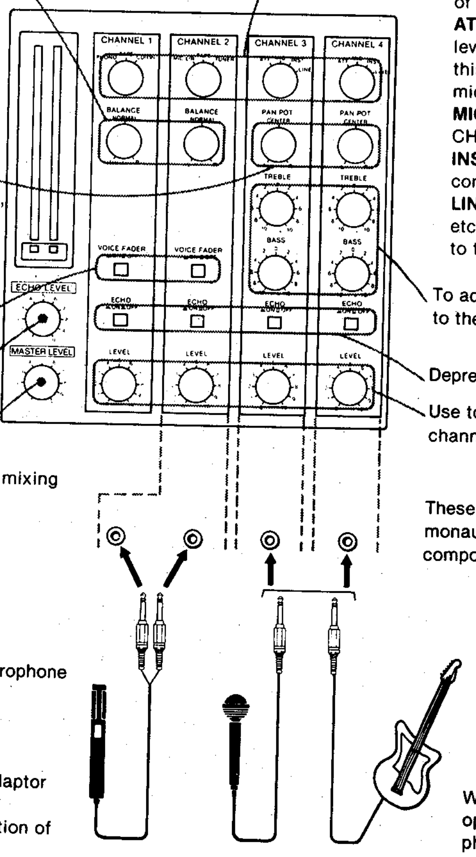
ATT : When the microphone outputs a high level signal and there is distortion, set to this position to activate the built-in 20 dB microphone attenuator.

MIC : When a microphone is connected to the CHANNEL 3 or 4 jack.

INST : When a musical instrument is connected to the CHANNEL 3 or 4 jack.

LINE : When a component (tape deck, tuner, etc.) outputting a line level signal is connected to the CHANNEL 3 or 4 jack.

Adjust left/right balance with these controls.



These controls allow you to freely position the sound image of the microphones, etc. connected to CHANNEL 3 and 4 jacks. When set to the CENTER positions, the sound will appear to come from the mid-point between the left and right speakers.

When these switches are depressed, the voice or instrument positioned at the center fades. With some program sources, these switches do not function.

To adjust echo level

To control overall level during mixing

To adjust the tone of the source connected to the CHANNEL 3 or 4 jack

Depress to give the mixing source an echo effect.

Use to set the volumes of the respective channels when mixing.

These jacks are for connection of monaural microphones, musical instruments, components, etc.

Connect a one-point stereo microphone or two separate microphones to make stereo recordings.

If the optional PC-502M plug adaptor is used, the two CHANNEL 2 jacks can be used for connection of musical instruments.

When connecting a stereo component, use the optional PC-501M plug adaptor (phono jack ↔ phone plug).

PREPARATIONS

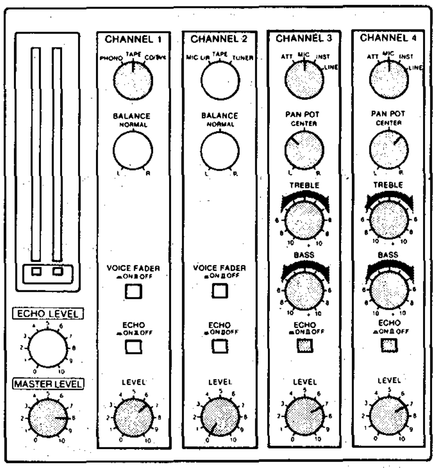
1 First decide which channels will be used and set the selectors to the required sources.
2 Set the LEVEL controls of the channels to be used to 7 or 8 and set the LEVEL controls of the unused channels to 0.
3 Set the MASTER LEVEL controls to about 8.
4 Connect the required microphones, instruments, components, etc. To the rear panel jacks and front panel jacks.

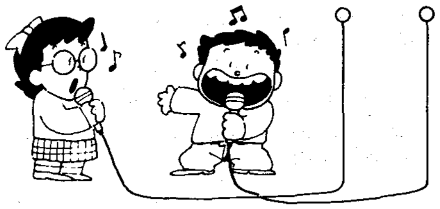
SETTING THE MIXING LEVEL ACCURATELY

1 Checking the deflection of the level meter and listening to the sound, set the LEVEL controls so that the overall effect is as required.
2 Adjust the MASTER LEVEL control so that, when the loudest passage of the program is heard, the level meter deflects to the 100% point.

A SING-ALONG DUET

Insert the recorded cassette in deck A and use AMS or music scan to locate the required selection. Set the ECHO switches and BASS and TREBLE controls as required.


CHANNEL 1
PHONO TAPE COMP
CHANNEL 2
MIC L/R TAPE TUNER
CHANNEL 3
ATT MIC INST LINE
CHANNEL 4
ATT MIC INST LINE
BALANCE NORMAL
PAN POT CENTER
TREBLE
BASS
VOICE FADER ON OFF
ECHO ON OFF
LEVEL
ECHO LEVEL
MASTER LEVEL



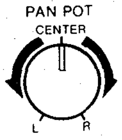
Balancing the levels of vocal and tape

For satisfactory sing-along performances, it is important to set the level of the tape a little bit lower than that of the vocal.

To move the sound image using the PAN POT (Panoramic Potentiometers) controls

The position of the sound image from the microphones or musical instruments connected to the CHANNEL 3 and 4 jacks can be adjusted to any position between the left and right speakers using the PAN POT controls. If these are adjusted while someone is singing into a microphone, it sounds as if the singer was moving on the stage.

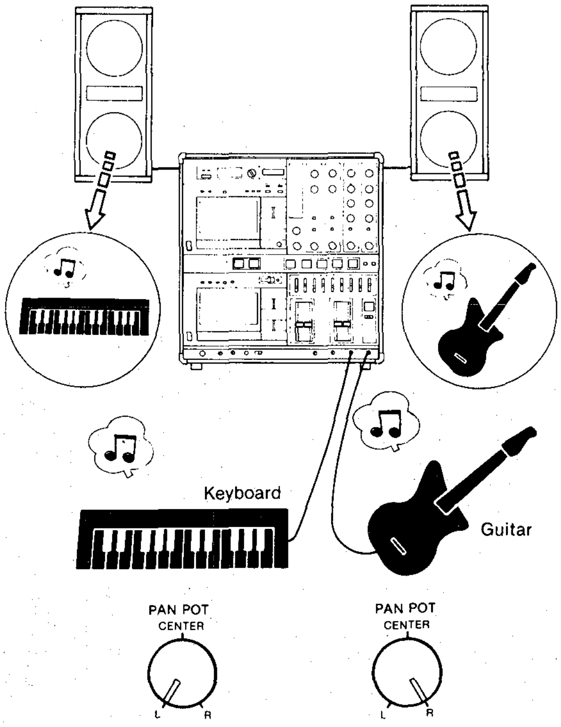
Pan pots are provided for both CHANNELs 3 and 4 so that two vocalists can be heard to be moving independently.


PAN POT
CENTER
L
R

L: When moved in this direction, the sound seems to come from the left.
R: When moved in this direction, the sound seems to come from the right.
CENTER: When set to this position, the sound seems to come from the center.

For improved stereo effect

Set the CHANNEL 3 PAN POT control to L and the CHANNEL 4 PAN POT control to R.


Keyboard
Guitar
PAN POT
CENTER
L
R
PAN POT
CENTER
L
R

To fade out vocals

When the VOICE FADER switches are depressed (▭ ON), the vocal is eliminated from the record or tape being played. This means that, even if you don't have a special sing-along record or tape, you can still enjoy singing along. The effect is slightly different with different records and tapes.

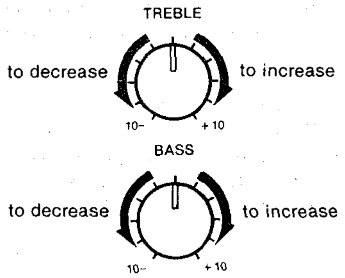
Using the echo effect to produce more professional results

When the ECHO switches are depressed (▭ ON), the mixing sources are enhanced by an echo effect which can be used to make sing-along performances sound more professional.

The amount of echo can be varied using the ECHO LEVEL control.

BASS and TREBLE tone controls

The BASS and TREBLE tone controls can be used independently to adjust the tone of the voice or musical instrument.


TREBLE
to decrease
to increase
10-
+10
BASS
to decrease
to increase
10-
+10

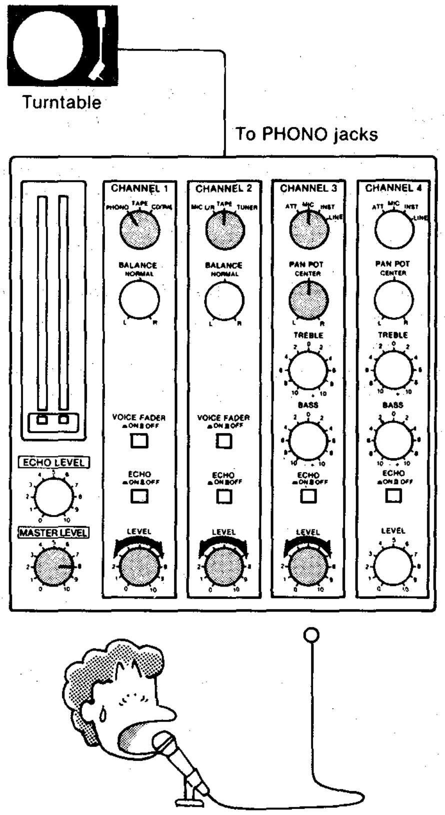
Using a wireless microphone

In addition to use with ordinary microphones, the sound processor can also be used with a wireless microphone. Set the CHANNEL 2 source selector to TUNER, the band selector to FM and tune to about 89 MHz according to the microphone used. Switch the wireless microphone power switch on and fine tune to the frequency where the sound from the microphone is loudest. Adjust the level with the CHANNEL 2 LEVEL control.

DJ PERFORMANCE

For this type of use, the tape should be played back on deck A or a record played on a turntable connected to the PHONO jacks.

- During tape playback, turn up the CHANNEL 2 level and turn down the CHANNEL 1 level.
- When playing a record, turn up the CHANNEL 1 level and turn down the CHANNEL 2 level.
- When the disc jockey is talking, turn up the CHANNEL 3 level ; at other times, keep it turned down.


Turntable
To PHONO jacks
CHANNEL 1
CHANNEL 2
CHANNEL 3
CHANNEL 4
BALANCE
PAN POT
TREBLE
BASS
VOICE FADER
ECHO
LEVEL
ECHO LEVEL
MASTER LEVEL

Hints on how to introduce selections

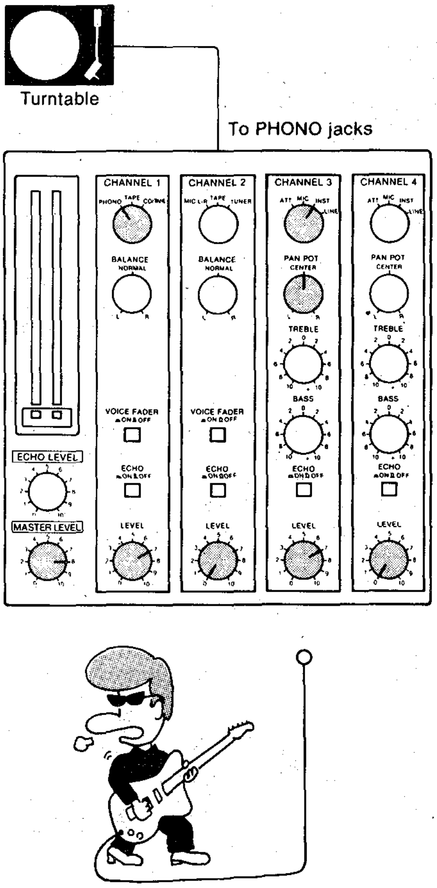
Turn the ECHO switch on when you are introducing selections and start the music before the echo completely dies away. Another technique that will make you sound more professional as a DJ is fading-out before selections finish.

Note

When you are using a microphone, a strange sound will sometimes be heard from the speakers due to sound from the speakers being picked up by the microphone; this is called "howling". To eliminate howling, reduce the level of the channel to which the microphone is connected.

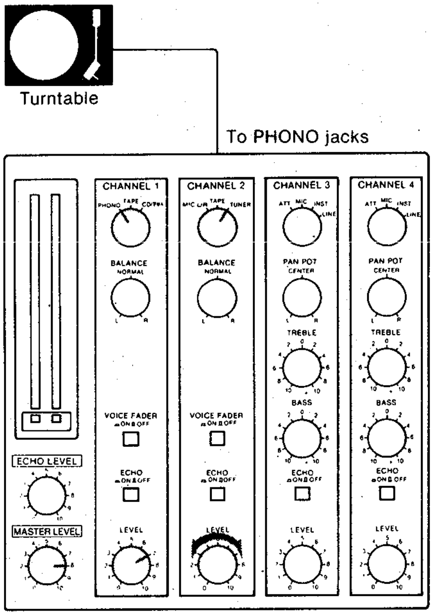
TO PLAY ALONG WITH PROFESSIONAL MUSICIANS

With an electric guitar, for example, connected to the front panel CHANNEL 3 jack and a turntable connected to the PHONO jacks, you can play along to the records of your favorite musicians.


Turntable
To PHONO jacks
CHANNEL 1
CHANNEL 2
CHANNEL 3
CHANNEL 4
BALANCE
PAN POT
TREBLE
BASS
VOICE FADER
ECHO
LEVEL
ECHO LEVEL
MASTER LEVEL

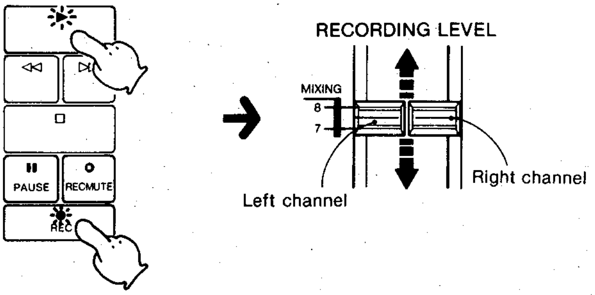
TO ADD THE SOUND OF WAVES TO MUSIC

This is done using interstation noise in the FM band.
When you can hear the sound of waves, adjust the CHANNEL 2 LEVEL control to obtain the required wave-like effect.
The FM MODE selector should be set to MONO.


Turntable
To PHONO jacks
CHANNEL 1
CHANNEL 2
CHANNEL 3
CHANNEL 4
BALANCE
PAN POT
TREBLE
BASS
VOICE FADER
ECHO
LEVEL
ECHO LEVEL
MASTER LEVEL

RECORDING MIXING PERFORMANCES

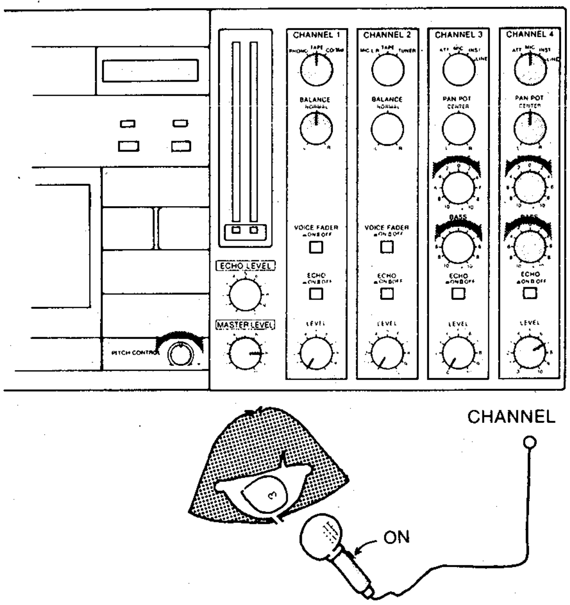
Mixing performances can be recorded using deck B. Keeping the ● REC key pressed, press the ▶ key to start recording.
Adjust the recording level with the REC LEVEL controls ; normally these should be set to MIXING position.
If you want to use deck B as a mixing source, a separate deck will have to be used for recording. This should be connected to the TAPE jacks at the rear.
If you use the optional RM-51 remote control unit, you will have both hands free to operate the mixer controls.


PAUSE
RECMUTE
REC
RECORDING LEVEL
MIXING
8
7
Left channel
Right channel

MULTI-CHANNEL RECORDING

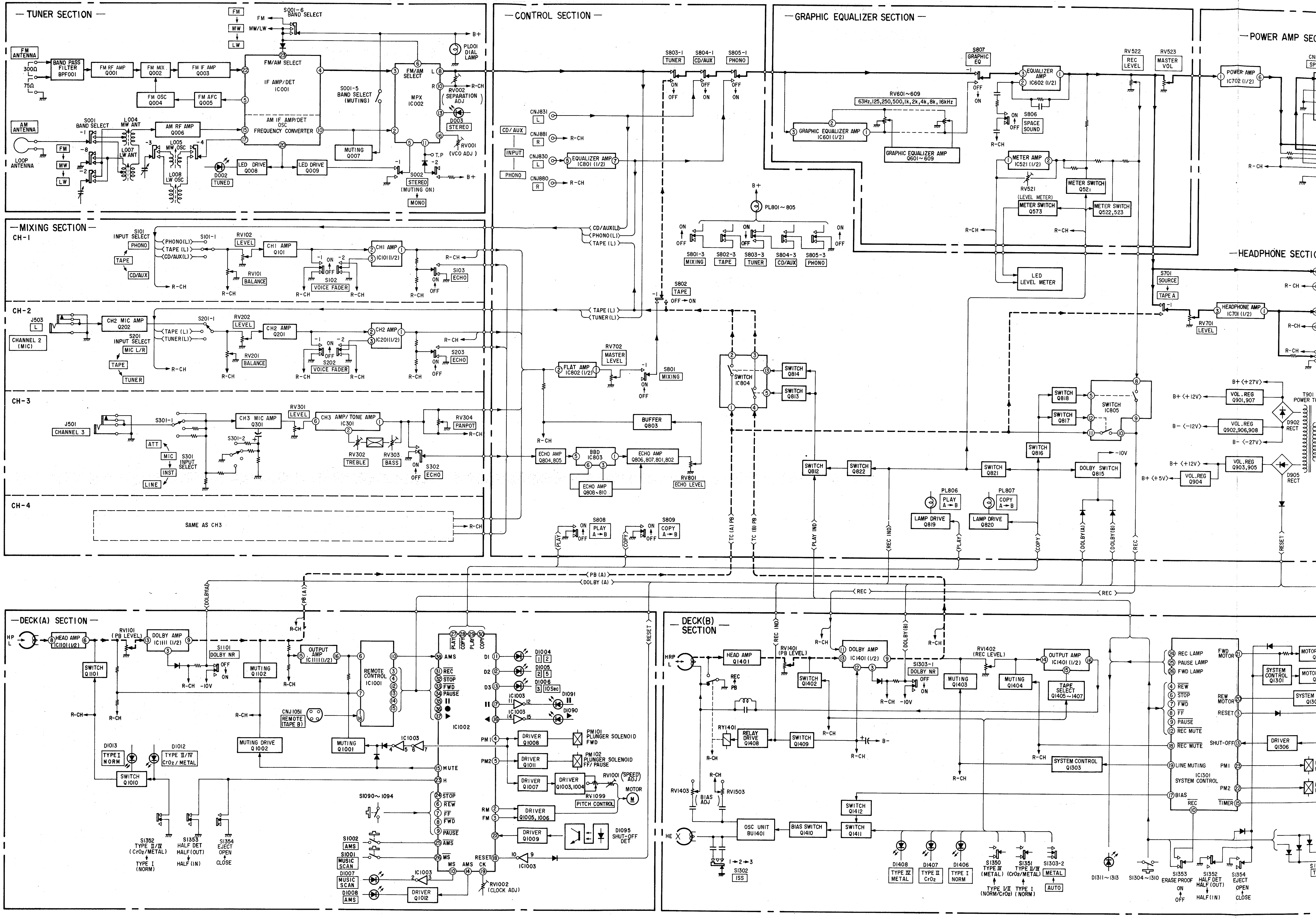
By performing multi-channel recording, one person can record a whole concert. You will need two tapes and a microphone equipped with a phone jack.

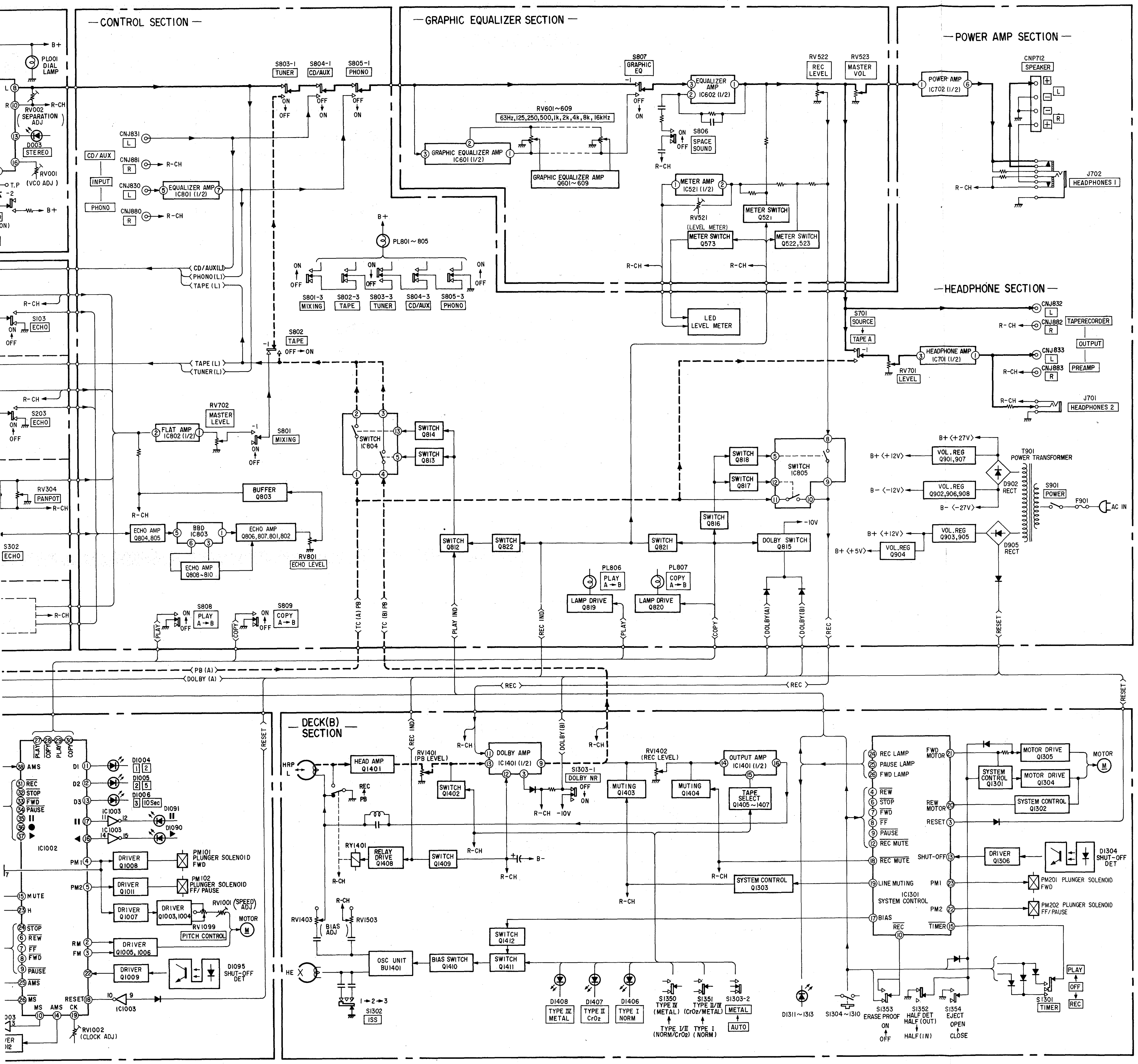
1 Depress the POWER switch (▬ ON).
2 Depress the MIXING button.
3 Insert the microphone plug into the CHANNEL 4 jack, set the CHANNEL 4 selector to MIC, the CHANNEL 4 PAN POT control to the CENTER position and the LEVEL controls for the other channels to 0.


CHANNEL 1
CHANNEL 2
CHANNEL 3
CHANNEL 4
BALANCE
PAN POT
BASS
VOICE FADER
ECHO
LEVEL
ECHO LEVEL
MASTER LEVEL
PITCH CONTROL
CHANNEL
ON

4 Insert cassette 1 in deck B. Then, after setting the recording level, and with the sound processor in recording mode, sing into the microphone.
5 After recording your performance, insert cassette 1 in deck A and rewind to the point where you started the performance.
6 Insert cassette 2 in deck B and perform mixing recording of cassette 1 and CHANNEL 4 (See page 19). In this way, you can record duet with your previous recording.
For greater effect, you can use the PAN POT control to change the position of your voice or vary the speed with the PITCH CONTROL knob to alter the tone.
7 After making the second recording, you can move cassette 2 to deck A and cassette 1 to deck B and make a third recording.

1-2. BLOCK DIAGRAM

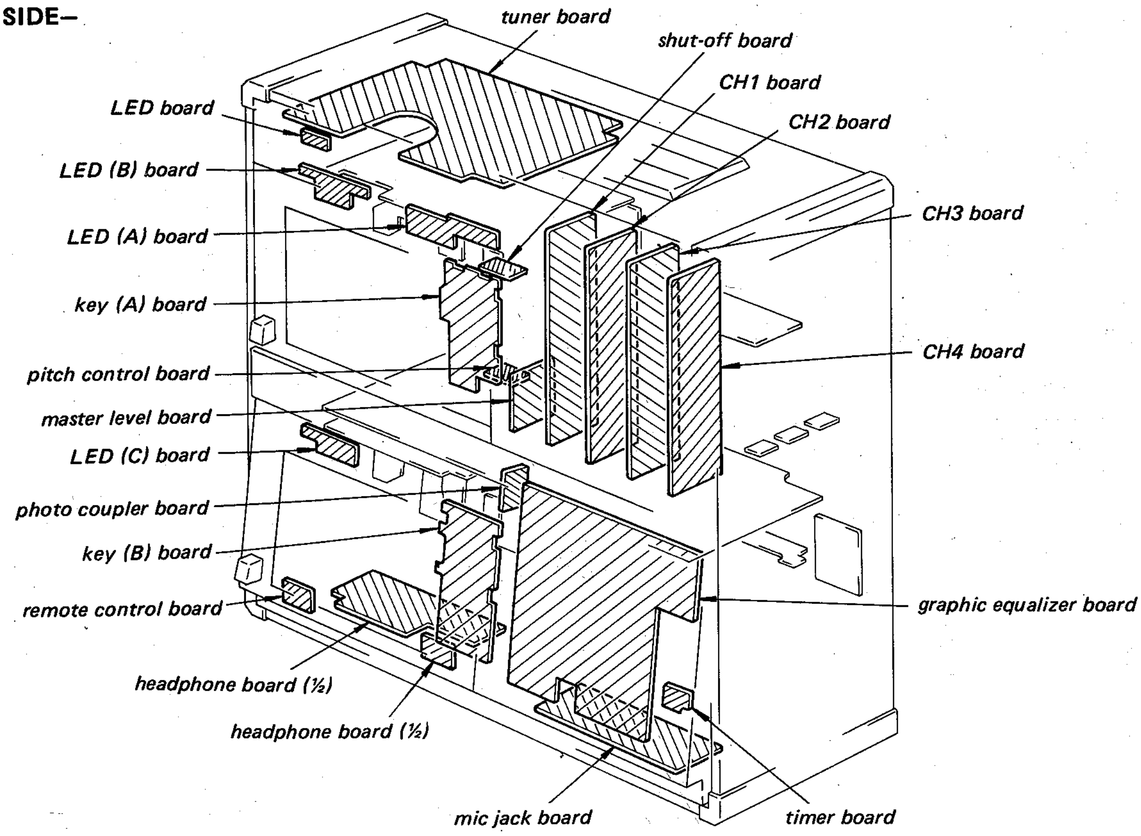

TUNER SECTION
FM ANTENNA
300Ω
75Ω
BAND PASS FILTER BPF001
FM RF AMP Q001
FM MIX Q002
FM IF AMP Q003
FM OSC Q004
FM AFC Q005
S001-6 BAND SELECT
FM
MW/LW
FM/AM SELECT
IF AMP/DET IC001
AM IF AMP/DET OSC FREQUENCY CONVERTER
S001-5 BAND SELECT (MUTING)
FM/AM SELECT
MPX IC002
MUTING Q007
B+
PL001 DIAL LAMP
R-CH
RV002 (SEPARATION ADJ)
D003 STEREO
RV001 (VCO ADJ)
T.P
S002 STEREO (MUTING ON) MONO
AM ANTENNA
LOOP ANTENNA
S001 BAND SELECT
L004 MW ANT
L007 LW ANT
AM RF AMP Q006
L005 MW OSC
L008 LW OSC
D002 TUNED
LED DRIVE Q008
LED DRIVE Q009
MIXING SECTION
CH-1
S101 INPUT SELECT
PHONO
TAPE
CD/AUX
S101-1
RV102 LEVEL
CH1 AMP Q101
RV101 BALANCE
CH1 AMP IC101(1/2)
S102 VOICE FADER
S103 ECHO
CH-2
J503
CHANNEL 2 (MIC)
CH2 MIC AMP Q202
S201 INPUT SELECT
MIC L/R
TUNER
S201-1
RV202 LEVEL
CH2 AMP Q201
RV201 BALANCE
CH2 AMP IC201(1/2)
S202 VOICE FADER
S203 ECHO
CH-3
J501 CHANNEL 3
S301-1
CH3 MIC AMP Q301
RV301 LEVEL
CH3 AMP/TONE AMP IC301
RV302 TREBLE
RV303 BASS
RV304 PANPOT
S302 ECHO
S301-2
ATT
MIC
INST
LINE
S301 INPUT SELECT
CH-4
SAME AS CH3
CONTROL SECTION
CD/AUX
INPUT
PHONO
CNJ831
CNJ881
CNJ830
CNJ880
EQUALIZER AMP IC801 (1/2)
S803-1 TUNER
S804-1 CD/AUX
S805-1 PHONO
PL801~805
S801-3 MIXING
S802-3 TAPE
S803-3 TUNER
S804-3 CD/AUX
S805-3 PHONO
S802 TAPE
FLAT AMP IC802 (1/2)
RV702 MASTER LEVEL
S801 MIXING
SWITCH IC804
SWITCH Q814
SWITCH Q813
BUFFER Q803
ECHO AMP Q804,805
BBD IC803
ECHO AMP Q806,807,801,802
ECHO AMP Q808~810
RV801 ECHO LEVEL
SWITCH Q812
SWITCH Q822
S808 PLAY A→B
S809 COPY A→B
PL806 PLAY A→B
LAMP DRIVE Q819
PL807 COPY A→B
LAMP DRIVE Q820
GRAPHIC EQUALIZER SECTION
S807 GRAPHIC EQ
RV601~609
63Hz,125,250,500,1k,2k,4k,8k,16kHz
GRAPHIC EQUALIZER AMP IC601 (1/2)
GRAPHIC EQUALIZER AMP Q601~609
EQUALIZER AMP IC602 (1/2)
S806 SPACE SOUND
RV522 REC LEVEL
RV523 MASTER VOL
METER AMP IC521 (1/2)
RV521 (LEVEL METER)
METER SWITCH Q573
METER SWITCH Q521
METER SWITCH Q522,523
LED LEVEL METER
SWITCH Q818
SWITCH Q817
SWITCH IC805
SWITCH Q816
SWITCH Q821
DOLBY SWITCH Q815
POWER AMP SECTION
POWER AMP IC702 (1/2)
HEADPHONE SECTION
S701 SOURCE TAPE A
HEADPHONE AMP IC701 (1/2)
RV701 LEVEL
B+ (+27V)
B+ (+12V)
VOL.REG Q901,907
B- (-12V)
VOL.REG Q902,906,908
B- (-27V)
D902 RECT
T901 POWER
B+ (+12V)
B+ (+5V)
VOL.REG Q904
VOL.REG Q903,905
D905 RECT
TC(A) PB
TC(B) PB
PLAY IND
REC IND
DOLBY(A)
DOLBY(B)
REC
RESET
PB(A)
DOLBY(A)
DECK(A) SECTION
HP L
HEAD AMP IC1101(1/2)
RV1101 (PB LEVEL)
DOLBY AMP IC1111 (1/2)
S1101 DOLBY NR
SWITCH Q1101
OUTPUT AMP IC1111(1/2)
MUTING Q1102
REMOTE CONTROL IC1001
CNJ1051 REMOTE (TAPE B)
MUTING DRIVE Q1002
MUTING Q1001
IC1003
IC1002
AMS
REC
STOP
FWD
PAUSE
D1004
D1005
D1006 10Sec
D1091
D1090
DRIVER Q1008
PM101 PLUNGER SOLENOID FWD
DRIVER Q1011
PM102 PLUNGER SOLENOID FF/PAUSE
DRIVER Q1007
DRIVER Q1003,1004
RV1001 (SPEED ADJ)
RV1099 PITCH CONTROL
MOTOR
DRIVER Q1005,1006
DRIVER Q1009
D1095 SHUT-OFF DET
MUTE
S1090~1094
STOP
REW
FF
FWD
PAUSE
AMS
MS
S1002 AMS
S1001 MUSIC SCAN
D1007 MUSIC SCAN
D1008 AMS
DRIVER Q1012
RV1002 (CLOCK ADJ)
D1013 TYPE I NORM
D1012 TYPE II/IV CrO2/METAL
SWITCH Q1010
S1352 TYPE II/IV (CrO2/METAL) TYPE I (NORM)
S1353 HALF DET HALF(OUT) HALF(IN)
S1354 EJECT OPEN CLOSE
DECK(B) SECTION
HRP L
HEAD AMP Q1401
RV1401 (PB LEVEL)
SWITCH Q1402
DOLBY AMP IC1401 (1/2)
S1303-1 DOLBY NR
MUTING Q1403
MUTING Q1404
RV1402 (REC LEVEL)
OUTPUT AMP IC1401 (1/2)
TAPE SELECT Q1405~1407
RY1401
RELAY DRIVE Q1408
SWITCH Q1409
SYSTEM CONTROL Q1303
RV1403
BIAS ADJ
RV1503
HE
OSC UNIT BU1401
BIAS SWITCH Q1410
SWITCH Q1411
SWITCH Q1412
S1302 ISS
D1408 TYPE IV METAL
D1407 TYPE II CrO2
D1406 TYPE I NORM
S1350 TYPE IV (METAL)
S1351 TYPE II/IV (CrO2/METAL)
TYPE I/II (NORM/CrO2)
TYPE I (NORM)
S1303-2 METAL AUTO
D1311~1313
S1304~1310
S1353 ERASE PROOF ON OFF
S1352 HALF DET HALF(OUT) HALF(IN)
S1354 EJECT OPEN CLOSE
REC LAMP
PAUSE LAMP
FWD LAMP
REW
STOP
FWD
FF
PAUSE
REC MUTE
LINE MUTING
IC1301 SYSTEM CONTROL
BIAS
FWD MOTOR
REW MOTOR
RESET
SHUT-OFF
PM1
PM2
TIMER
SYSTEM CONTROL Q1301
DRIVER Q1306
R-CH



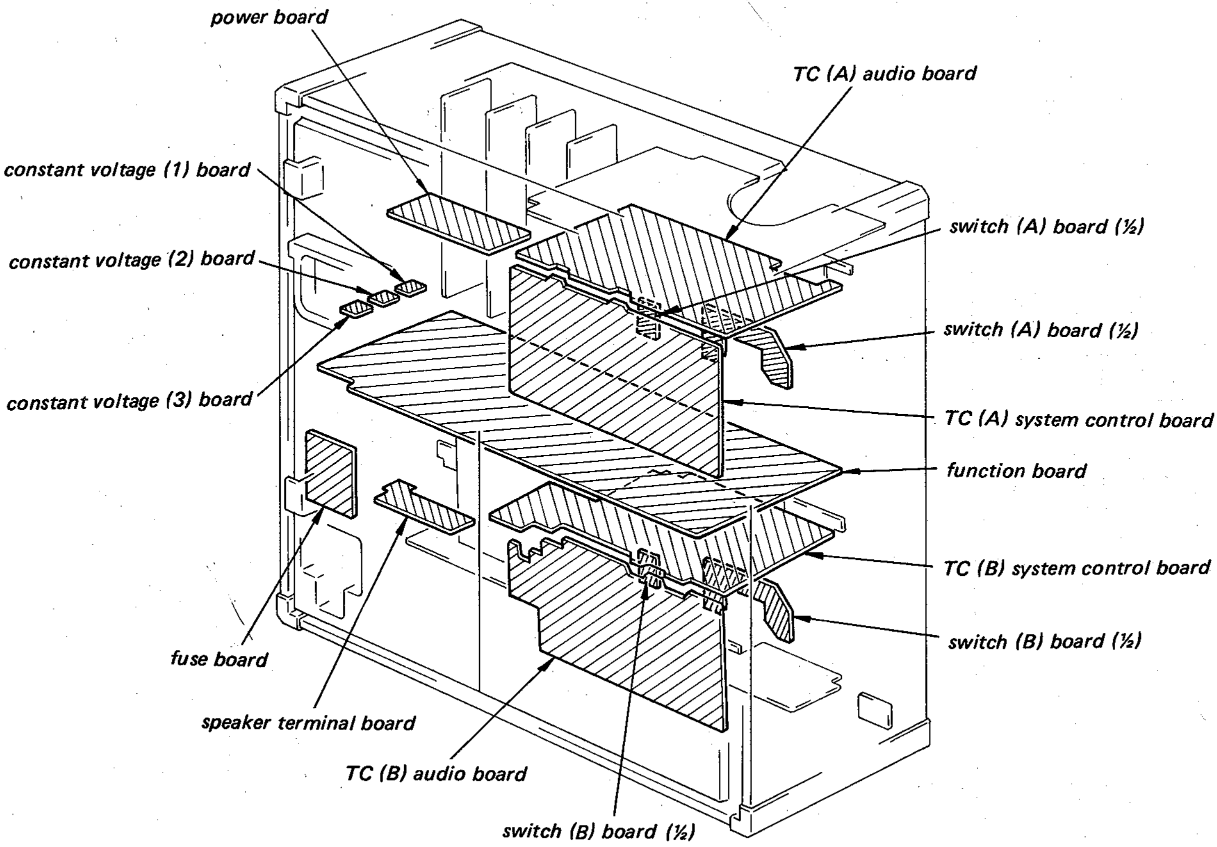
—CONTROL SECTION—
—GRAPHIC EQUALIZER SECTION—
—POWER AMP SECTION—
—HEADPHONE SECTION—
— DECK(B) SECTION —
PL001 DIAL LAMP
RV002 SEPARATION ADJ
D003 STEREO
RV001 (VCO ADJ)
T.P
R-CH
B+
CD/AUX
INPUT
PHONO
CNJ831 L
CNJ881 R
CNJ830 L
CNJ880 R
EQUALIZER AMP IC801 (1/2)
S803-1 TUNER
S804-1 CD/AUX
S805-1 PHONO
ON OFF
S807 GRAPHIC EQ
RV601~609
63Hz,125,250,500,1k,2k,4k,8k,16kHz
GRAPHIC EQUALIZER AMP IC601 (1/2)
GRAPHIC EQUALIZER AMP Q601~609
EQUALIZER AMP IC602 (1/2)
S806 SPACE SOUND
RV522 REC LEVEL
RV523 MASTER VOL
METER AMP IC521 (1/2)
RV521 (LEVEL METER)
METER SWITCH Q521
METER SWITCH Q573
METER SWITCH Q522,523
LED LEVEL METER
POWER AMP IC702 (1/2)
CNP712 SPEAKER
L R
J702 HEADPHONES 1
PL801~805
S801-3 MIXING
S802-3 TAPE
S803-3 TUNER
S804-3 CD/AUX
S805-3 PHONO
CD/AUX(L)
PHONO(L)
TAPE(L)
S103 ECHO
S203 ECHO
TAPE(L)
TUNER(L)
S802 TAPE
OFF → ON
RV702 MASTER LEVEL
FLAT AMP IC802 (1/2)
S801 MIXING
SWITCH IC804
SWITCH Q814
SWITCH Q813
RV304 PANPOT
BUFFER Q803
ECHO AMP Q804,805
BBD IC803
ECHO AMP Q806,807,801,802
ECHO AMP Q808~810
RV801 ECHO LEVEL
S302 ECHO
S808 PLAY A→B
S809 COPY A→B
SWITCH Q812
SWITCH Q822
SWITCH Q821
PL806 PLAY A→B
PL807 COPY A→B
LAMP DRIVE Q819
LAMP DRIVE Q820
SWITCH Q818
SWITCH Q817
SWITCH IC805
SWITCH Q816
DOLBY SWITCH Q815
-10V
S701 SOURCE
TAPE A
HEADPHONE AMP IC701 (1/2)
RV701 LEVEL
CNJ832 L
CNJ882 R
TAPERECORDER
OUTPUT
CNJ833 L
CNJ883 R
PREAMP
J701 HEADPHONES 2
B+ (+27V)
B+ (+12V)
VOL.REG Q901,907
B- (-12V)
VOL.REG Q902,906,908
B- (-27V)
T901 POWER TRANSFORMER
D902 RECT
S901 POWER
F901
AC IN
B+ (+12V)
VOL.REG Q903,905
B+ (+5V)
VOL.REG Q904
D905 RECT
PLAY
COPY
TC (A) PB
TC (B) PB
PLAY IND
REC IND
DOLBY(A)
DOLBY(B)
REC
RESET
PB (A)
DOLBY (A)
AMS
REC STOP FWD PAUSE
D1 D2 D3
D1004
D1005
D1006 10Sec
D1091
D1090
IC1003
IC1002
PM1 PM2
DRIVER Q1008
PM101 PLUNGER SOLENOID FWD
DRIVER Q1011
PM102 PLUNGER SOLENOID FF/PAUSE
DRIVER Q1007
DRIVER Q1003,1004
RV1001 (SPEED ADJ)
RV1099 PITCH CONTROL
MOTOR
MUTE
STOP REW FF FWD PAUSE
RM FM
DRIVER Q1005,1006
DRIVER Q1009
D1095 SHUT-OFF DET
AMS MS CK
RESET
RV1002 (CLOCK ADJ)
HRP L
HEAD AMP Q1401
RV1401 (PB LEVEL)
REC PB
DOLBY AMP IC1401 (1/2)
SWITCH Q1402
S1303-1 DOLBY NR
R-CH -10V
RV1402 (REC LEVEL)
MUTING Q1403
MUTING Q1404
OUTPUT AMP IC1401 (1/2)
TAPE SELECT Q1405~1407
RY1401
RELAY DRIVE Q1408
SWITCH Q1409
B-
SYSTEM CONTROL Q1303
RV1403 BIAS ADJ RV1503
SWITCH Q1412
SWITCH Q1411
BIAS SWITCH Q1410
OSC UNIT BU1401
HE
S1302 ISS
D1408 TYPE IV METAL
D1407 TYPE II CrO2
D1406 TYPE I NORM
S1350 TYPE IV (METAL)
S1351 TYPE II/IV (CrO2/METAL)
S1303-2 METAL AUTO
TYPE I/II (NORM/CrO2)
TYPE I (NORM)
D1311~1313
S1304~1310
REC LAMP
PAUSE LAMP
FWD LAMP
REW STOP FWD FF PAUSE REC MUTE
REC MUTE
LINE MUTING
IC1301 SYSTEM CONTROL
BIAS
REC
FWD MOTOR
REW MOTOR
RESET
SHUT-OFF
PM1 PM2
TIMER
SYSTEM CONTROL Q1301
MOTOR DRIVE Q1305
MOTOR DRIVE Q1304
SYSTEM CONTROL Q1302
MOTOR
DRIVER Q1306
D1304 SHUT-OFF DET
PM201 PLUNGER SOLENOID FWD
PM202 PLUNGER SOLENOID FF/PAUSE
S1353 ERASE PROOF ON OFF
S1352 HALF DET HALF (OUT) HALF (IN)
S1354 EJECT OPEN CLOSE
S1301 TIMER
PLAY OFF REC

1-3. CIRCUIT BOARDS LOCATION

–FRONT SIDE–


tuner board
shut-off board
CH1 board
CH2 board
LED board
LED (B) board
CH3 board
LED (A) board
key (A) board
CH4 board
pitch control board
master level board
LED (C) board
photo coupler board
key (B) board
graphic equalizer board
remote control board
headphone board (½)
headphone board (½)
mic jack board
timer board

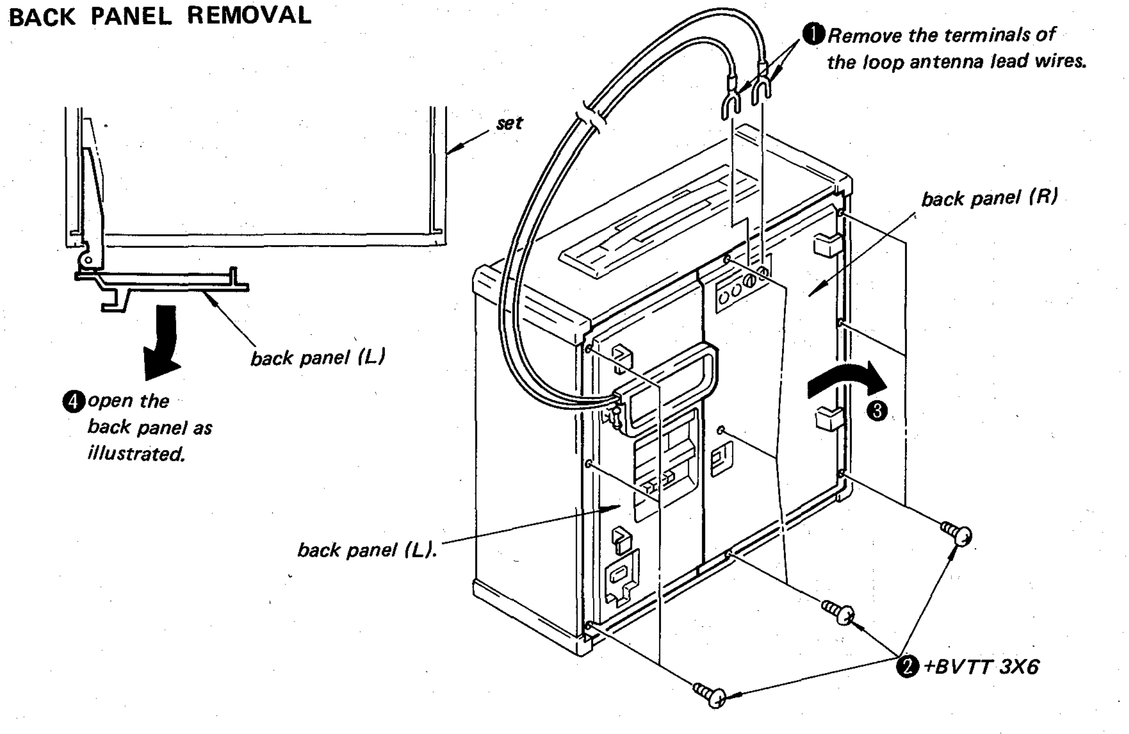
–REAR SIDE–


power board
TC (A) audio board
constant voltage (1) board
switch (A) board (½)
constant voltage (2) board
switch (A) board (½)
constant voltage (3) board
TC (A) system control board
function board
TC (B) system control board
switch (B) board (½)
fuse board
speaker terminal board
TC (B) audio board
switch (B) board (½)

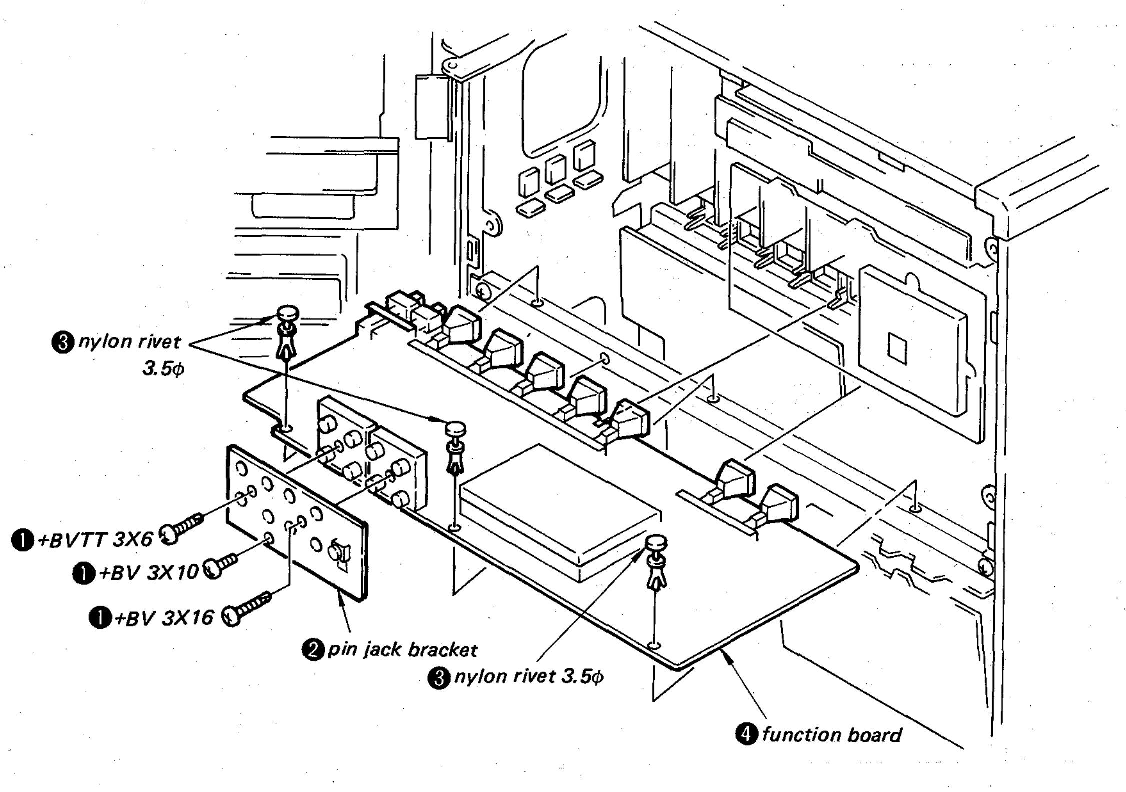
SECTION 2
DISASSEMBLY

- Follow the disassembly procedure in the numerical order given.

BACK PANEL REMOVAL


set
back panel (L)
④open the back panel as illustrated.
back panel (L)
①Remove the terminals of the loop antenna lead wires.
back panel (R)
③
②+BVTT 3X6

FUNCTION BOARD REMOVAL.

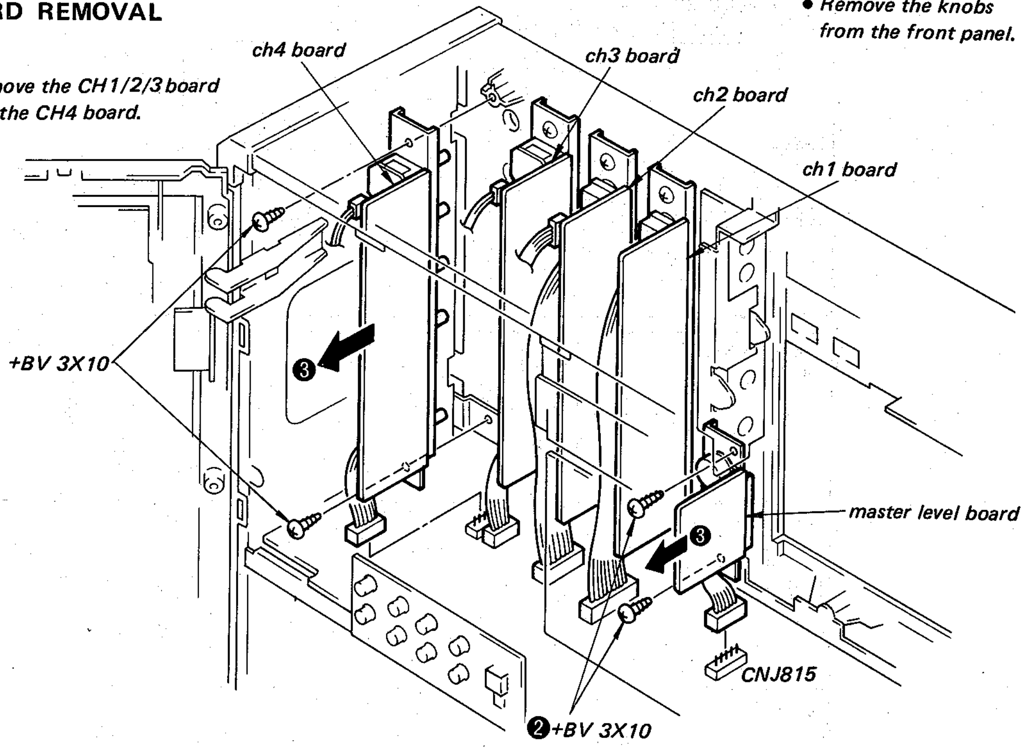

③nylon rivet 3.5φ
①+BVTT 3X6
①+BV 3X10
①+BV 3X16
②pin jack bracket
③nylon rivet 3.5φ
④function board

CH1
BO

①R
li

GRA

CH1–4 BOARD / MASTER LEVEL BOARD REMOVAL

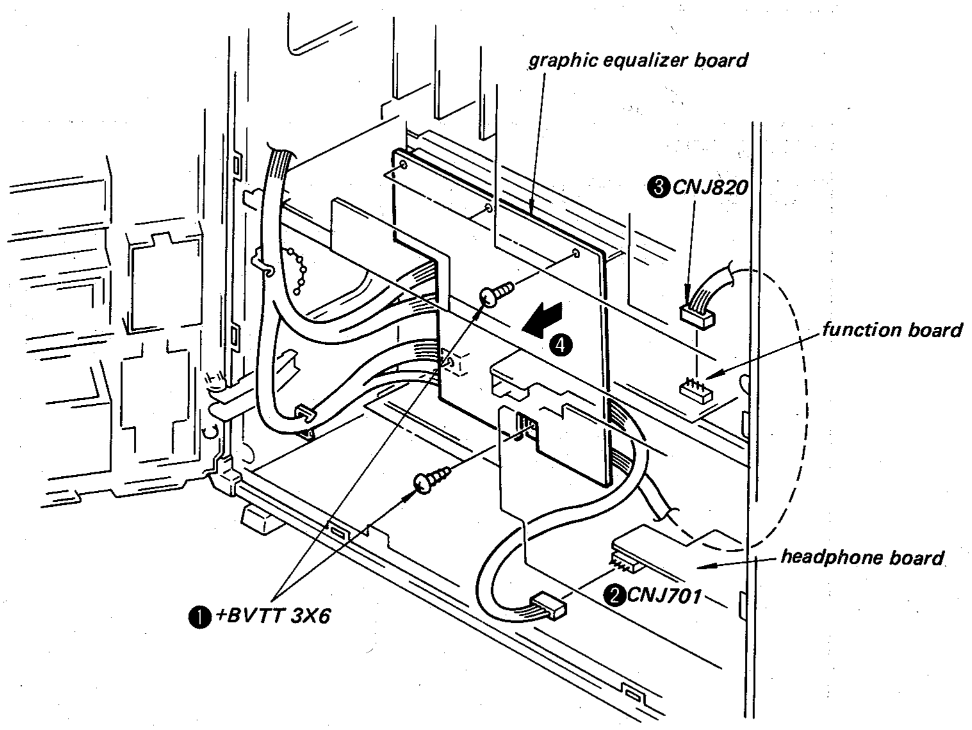


- *Remove the knobs from the front panel.*

❶ *Remove the CH1/2/3 board like the CH4 board.*

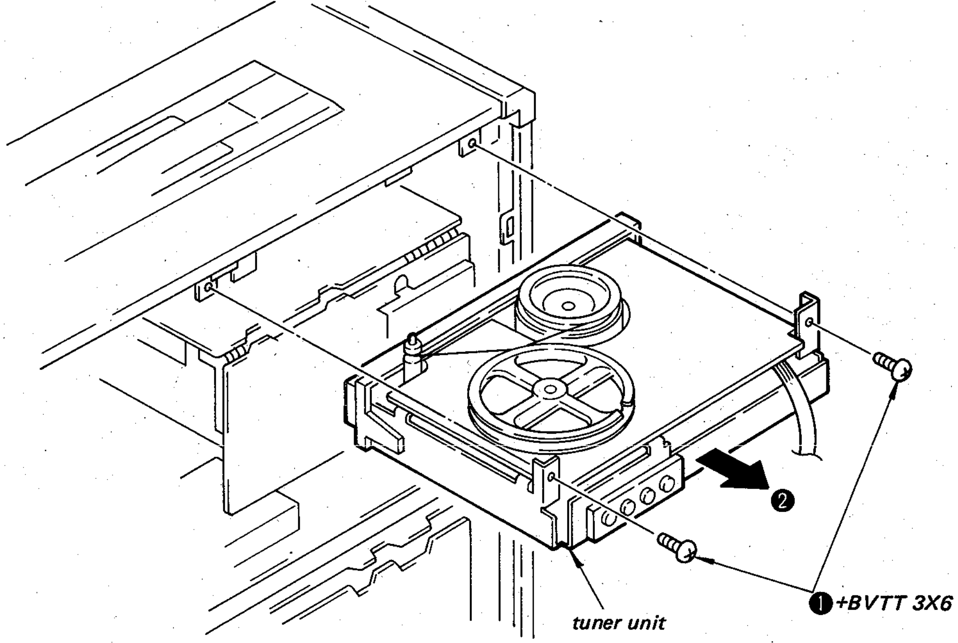
ch4 board
ch3 board
ch2 board
ch1 board
+BV 3X10
❸
master level board
❸
CNJ815
❷+BV 3X10

GRAPHIC EQUALIZER BOARD REMOVAL

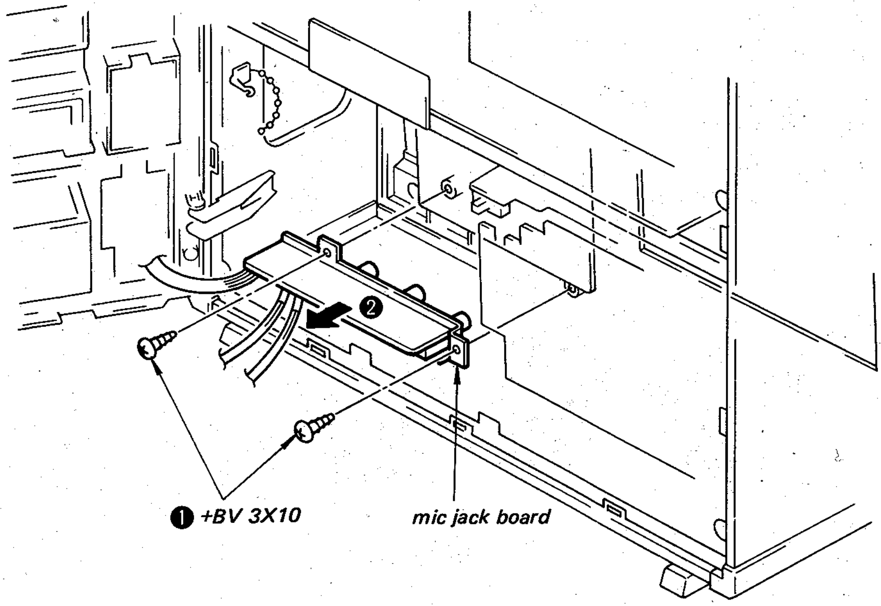


graphic equalizer board
❸CNJ820
❹
function board
headphone board
❷CNJ701
❶+BVTT 3X6

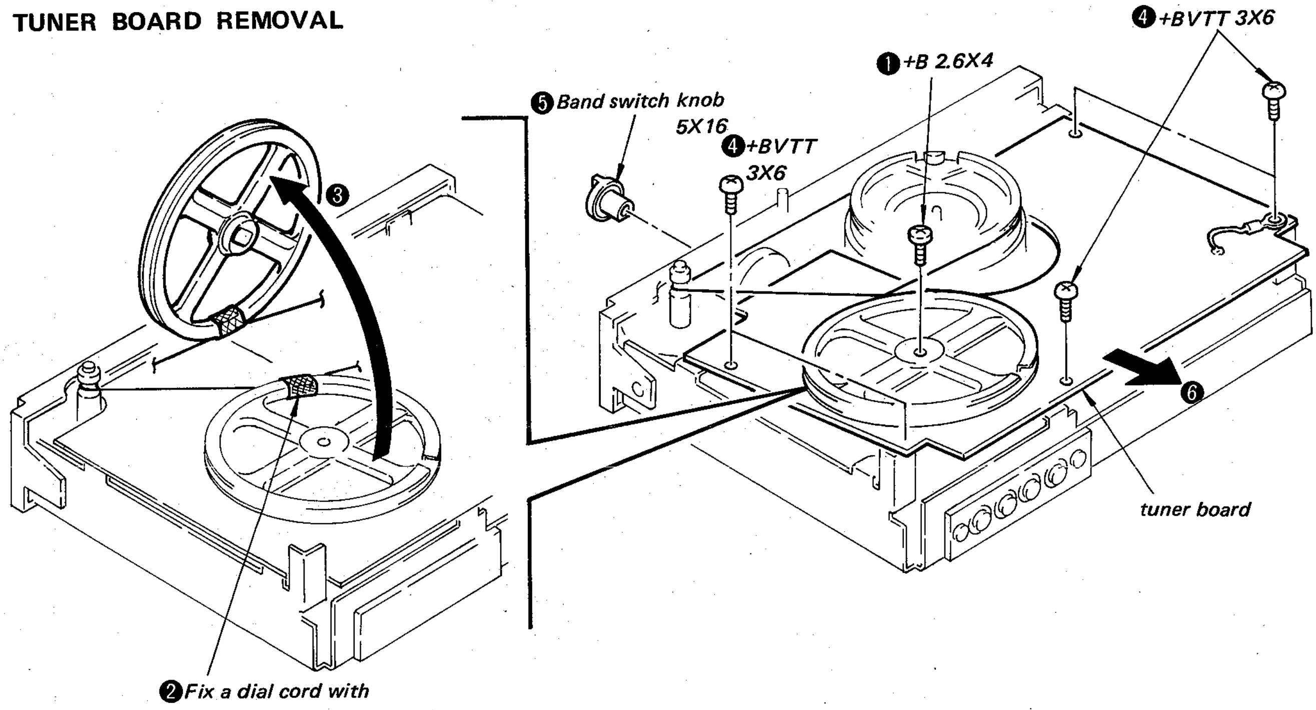
TUNER UNIT REMOVAL


❷
❶+BVTT 3X6
tuner unit

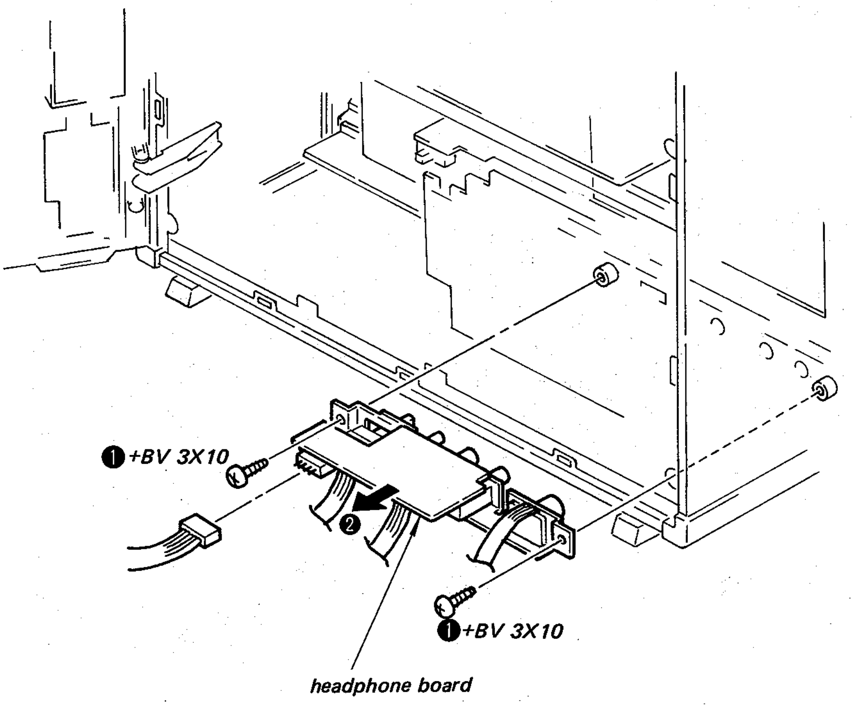
MIC JACK BOARD REMOVAL


❷
❶ +BV 3X10
mic jack board

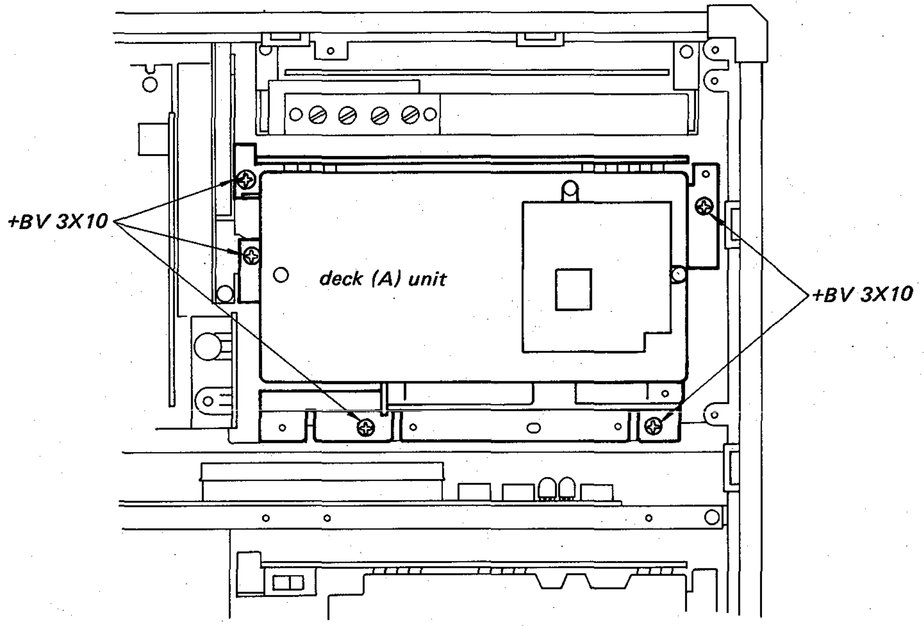
TUNER BOARD REMOVAL


❹+BVTT 3X6
❶+B 2.6X4
❺Band switch knob
5X16
❹+BVTT
3X6
❸
❻
tuner board
❷Fix a dial cord with
adhesive tape.

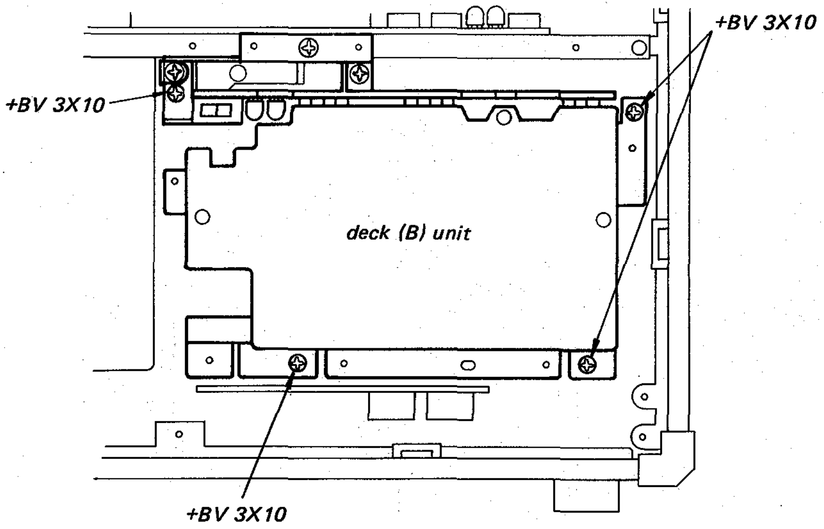
HEADPHONE BOARD REMOVAL


❶+BV 3X10
❷
❶+BV 3X10
headphone board

DECK (A) UNIT REMOVAL (1)

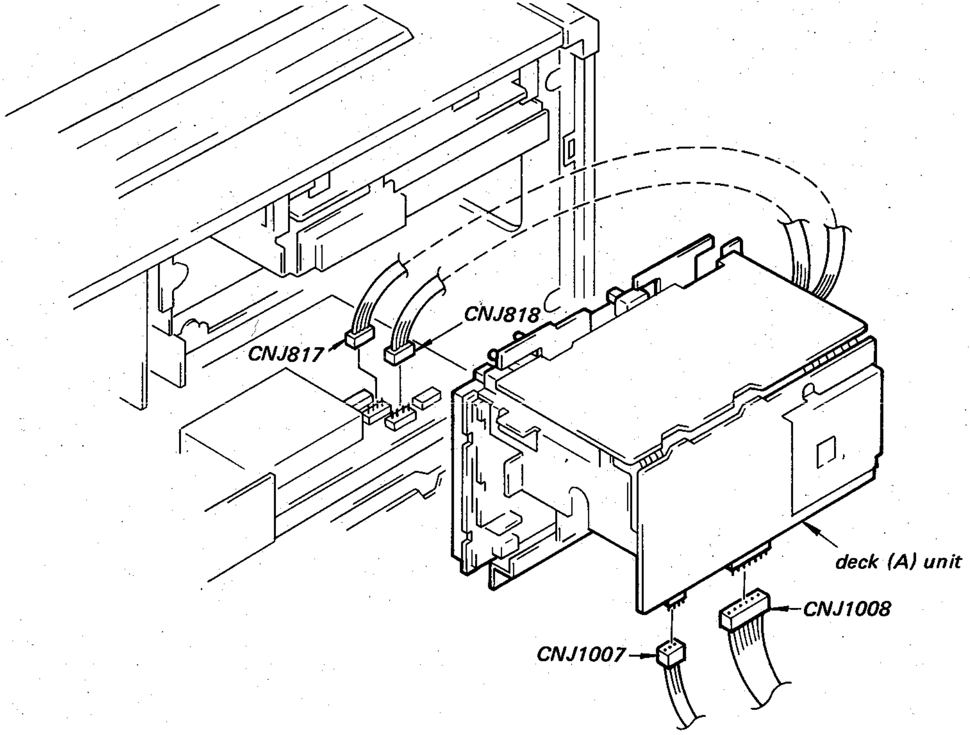

+BV 3X10
deck (A) unit
+BV 3X10

DECK (B) UNIT REMOVAL (1)


+BV 3X10
+BV 3X10
deck (B) unit
+BV 3X10

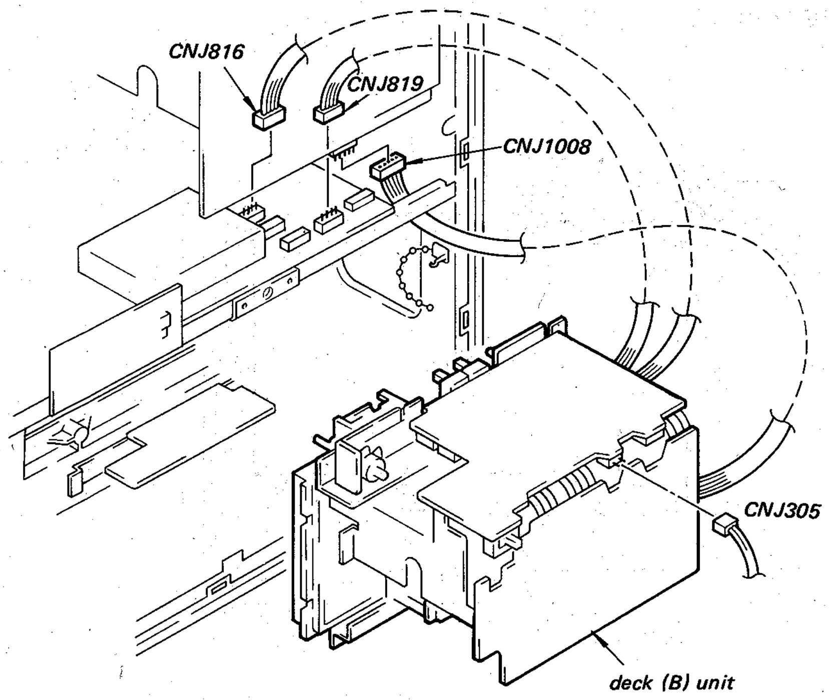
DECK (A) UNIT REMOVAL (2)

- *Remove each connectors from the boards.*

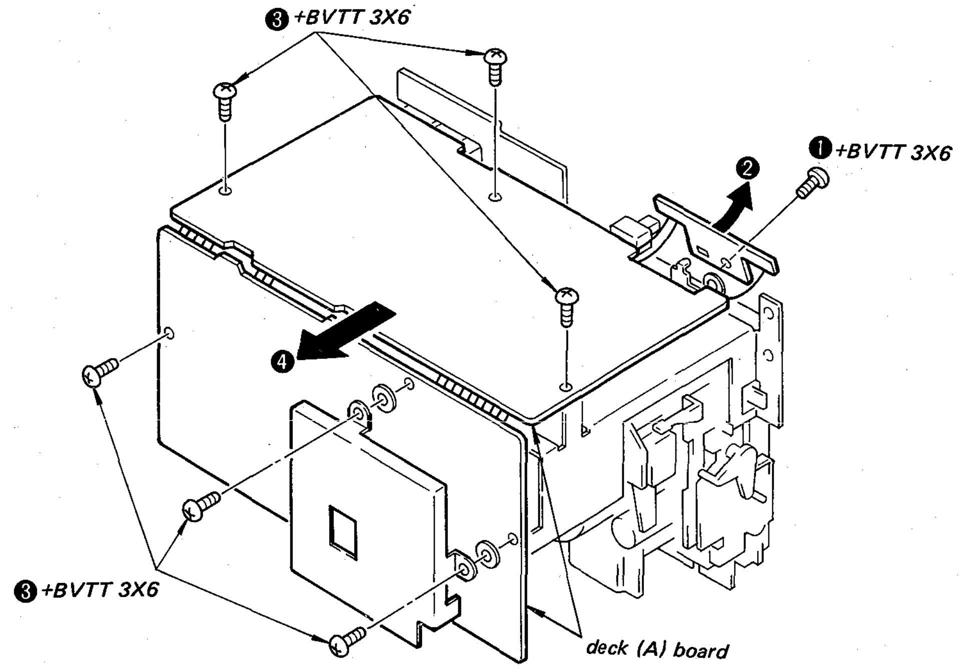

CNJ818
CNJ817
deck (A) unit
CNJ1008
CNJ1007

DECK (B) UNIT REMOVAL (2)

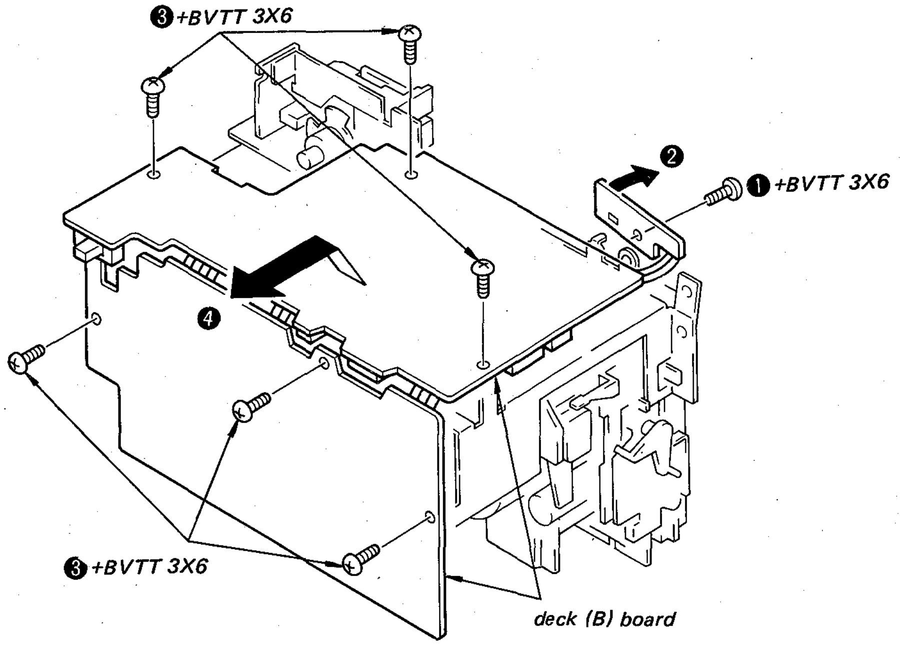
- *Remove each connectors from the boards.*


CNJ816
CNJ819
CNJ1008
CNJ305
deck (B) unit

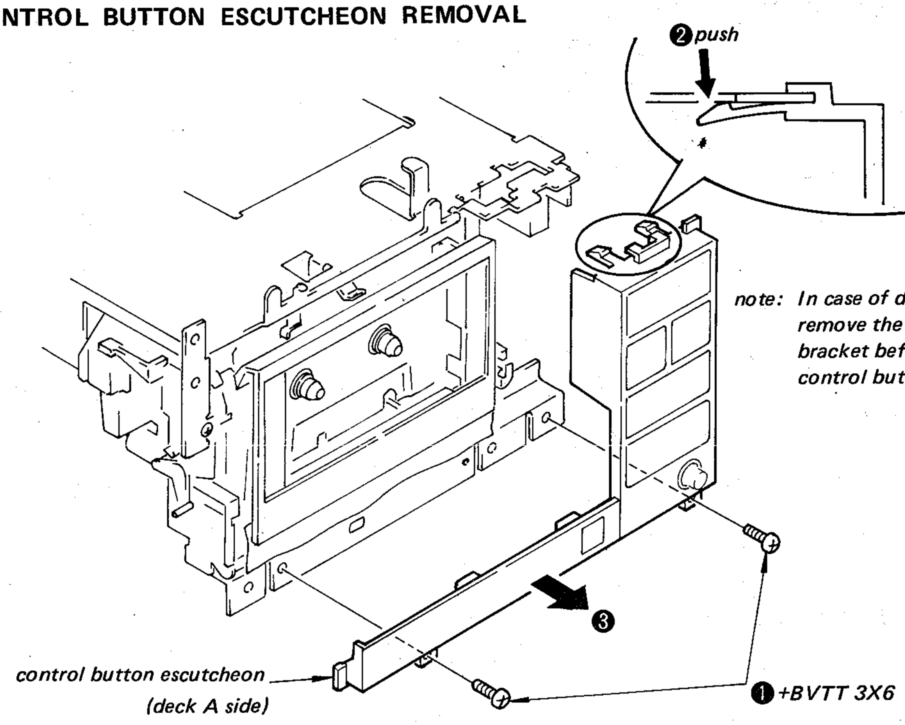
DECK (A) BOARD REMOVAL


❸ +BVTT 3X6
❶ +BVTT 3X6
❷
❹
❸ +BVTT 3X6
deck (A) board

DECK (B) BOARD REMOVAL

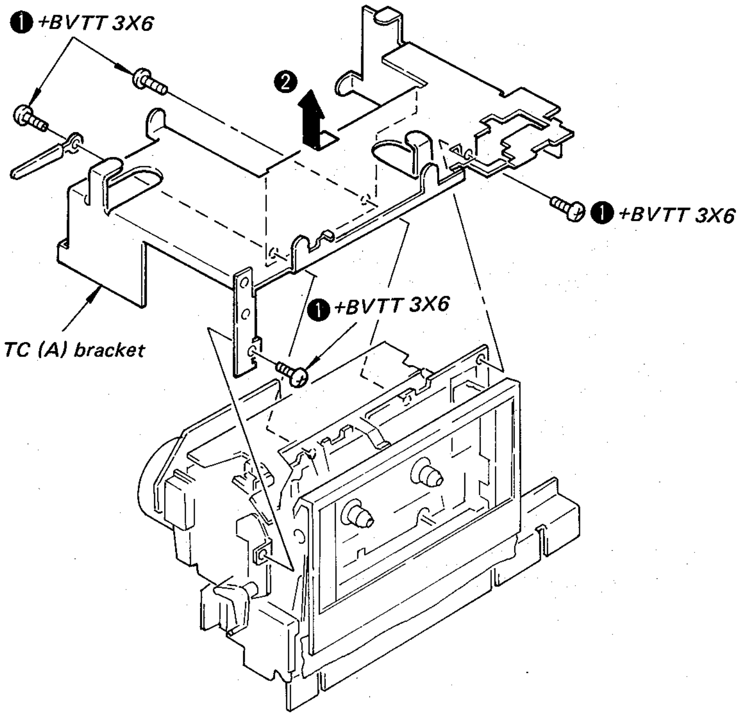

❸ +BVTT 3X6
❷
❶ +BVTT 3X6
❹
❸ +BVTT 3X6
deck (B) board

CONTROL BUTTON ESCUTCHEON REMOVAL

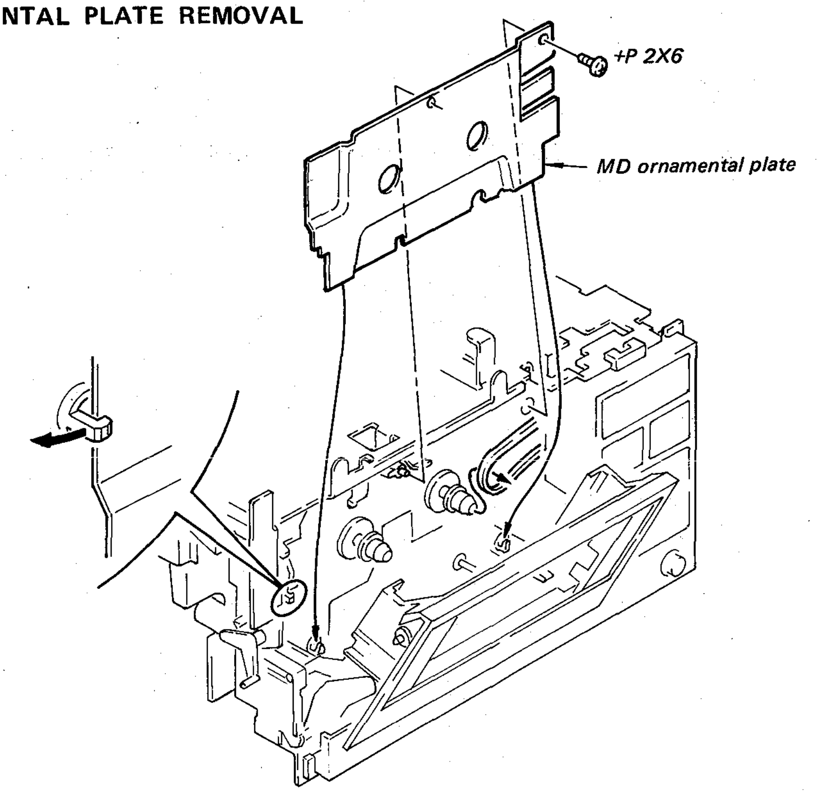

❷push
❸
control button escutcheon
(deck A side)
❶+BVTT 3X6

note: *In case of deck (B) side, remove the tape counter bracket before removing the control button escutcheon.*

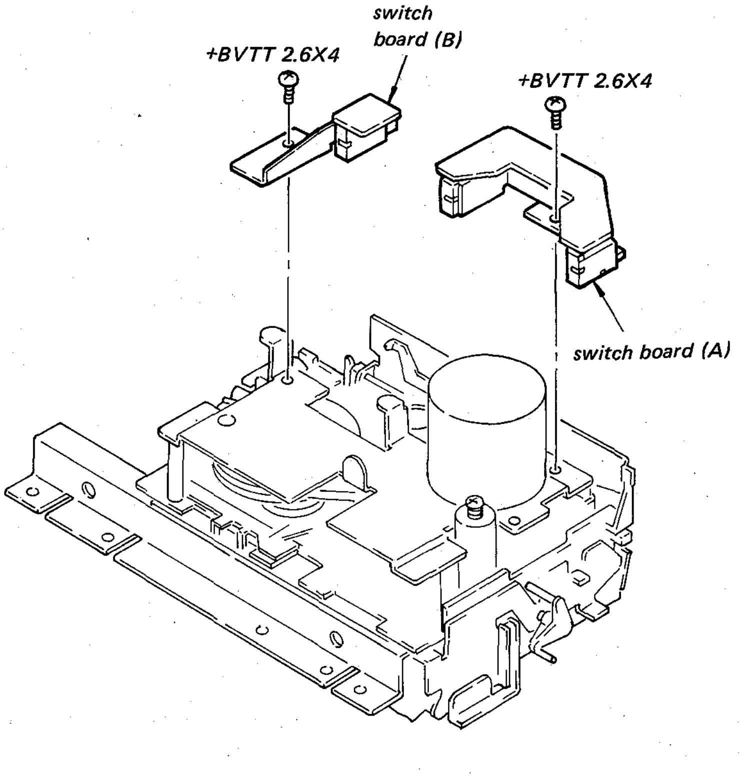
TC (A) BRACKET REMOVAL


❶+BVTT 3X6
❷
❶+BVTT 3X6
❶+BVTT 3X6
TC (A) bracket

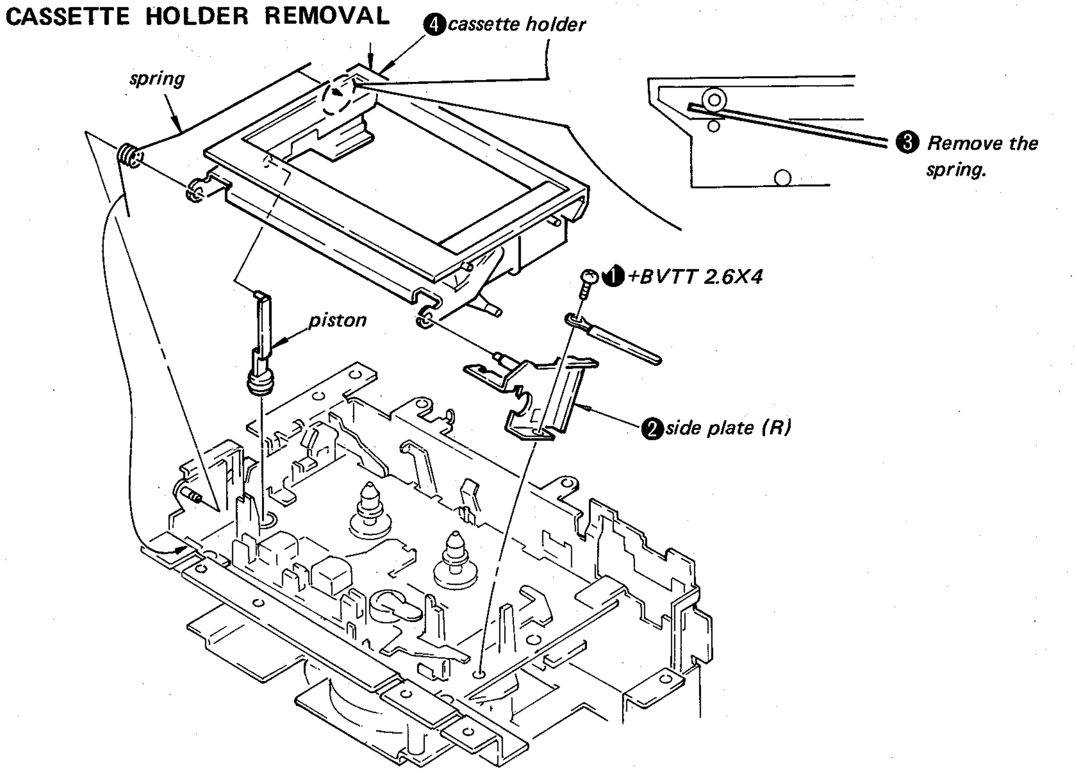
MD ORNAMENTAL PLATE REMOVAL


+P 2X6
MD ornamental plate
③

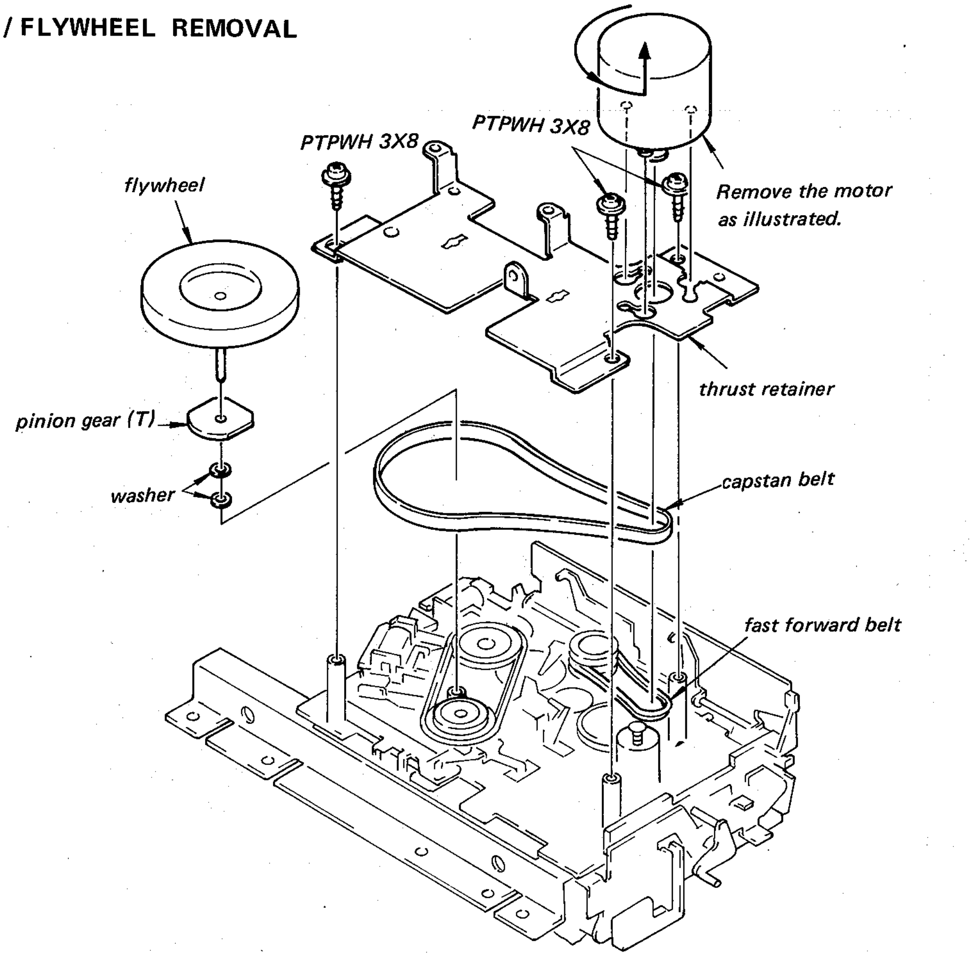
SWITCH BOARD (A) / (B) REMOVAL (2)


switch board (B)
+BVTT 2.6X4
+BVTT 2.6X4
switch board (A)

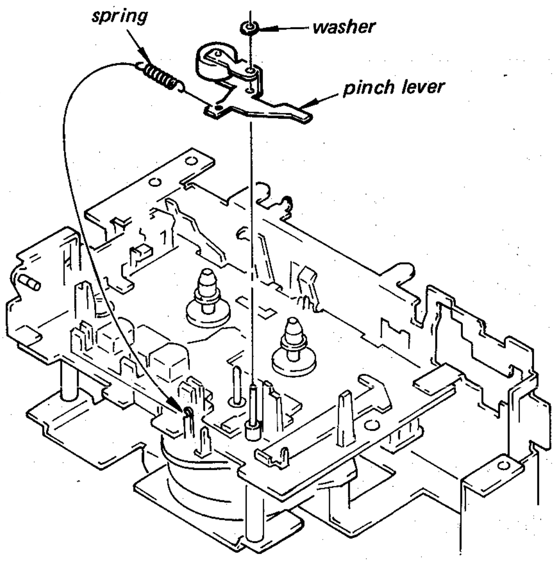
CASSETTE HOLDER REMOVAL

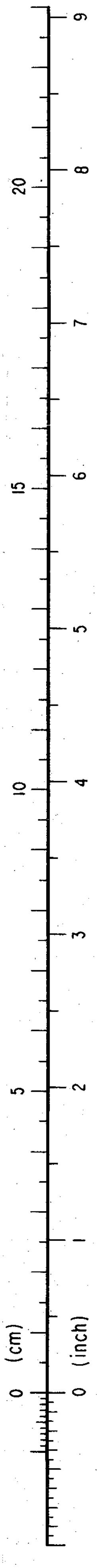

④cassette holder
spring
③ Remove the spring.
①+BVTT 2.6X4
piston
②side plate (R)

MOTOR / FLYWHEEL REMOVAL


PTPWH 3X8
PTPWH 3X8
flywheel
Remove the motor as illustrated.
thrust retainer
pinion gear (T)
washer
capstan belt
fast forward belt

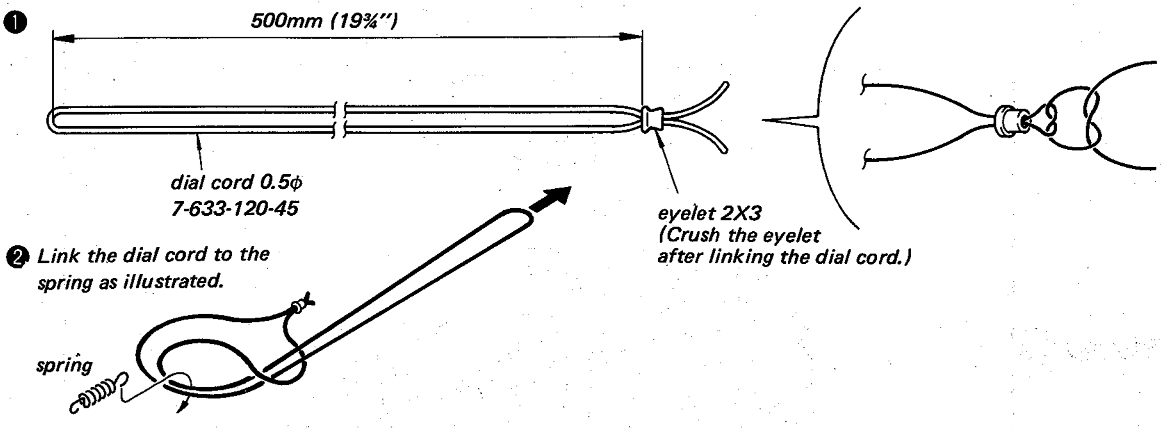
PINCH LEVER REMOVAL


spring
washer
pinch lever


(cm)
(inch)
0
5
10
15
20
0
1
2
3
4
5
6
7
8
9

DIAL CORD STRINGING / DIAL POINTER INSTALLATION

1) Preparation

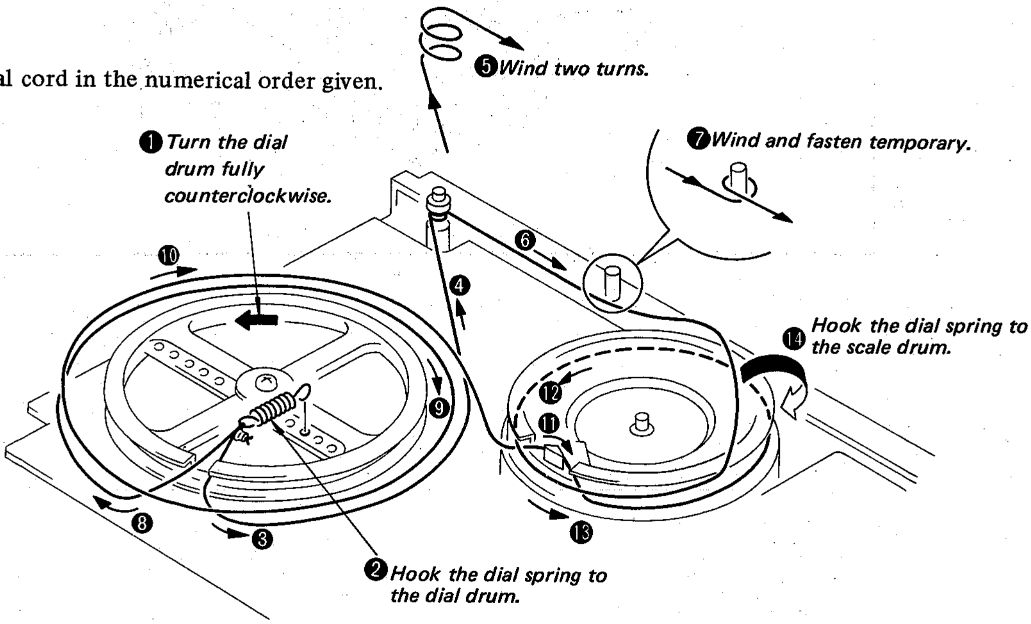

❶
500mm (19¾")
dial cord 0.5φ
7-633-120-45
eyelet 2X3
spring

(Crush the eyelet after linking the dial cord.)

❷ *Link the dial cord to the spring as illustrated.*

2) Stringing

- String the dial cord in the numerical order given.



❶ *Turn the dial drum fully counterclockwise.*

❷ *Hook the dial spring to the dial drum.*

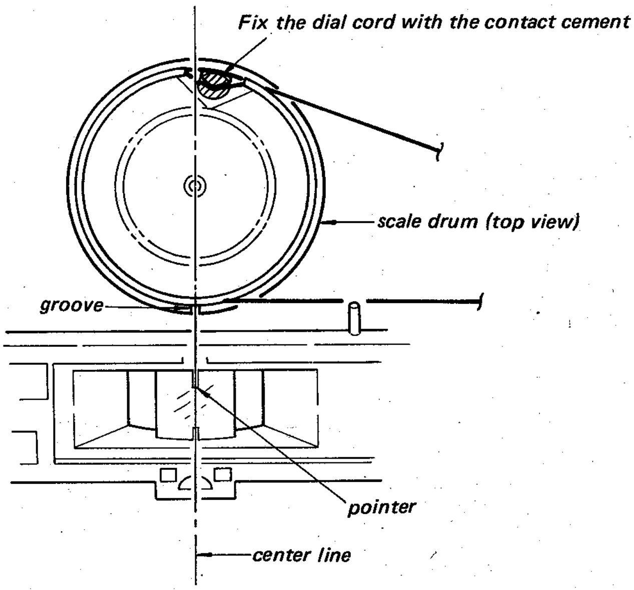
❺ *Wind two turns.*

❼ *Wind and fasten temporary.*

⓮ *Hook the dial spring to the scale drum.*

3) Scale drum position adjustment

1. *Turn the dial drum fully counterclockwise and turn the scale drum fixing the dial drum by hand.*
   (The dial drum slips.)
2. *Set the groove of the scale drum to the center line.*


scale drum (top view)
groove
pointer
center line

Fix the dial cord with the contact cement

SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

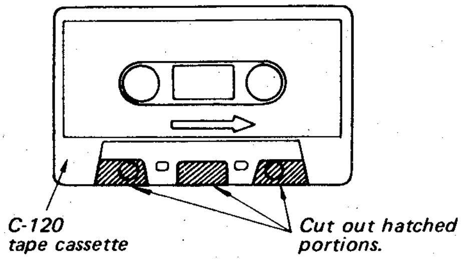
1. Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

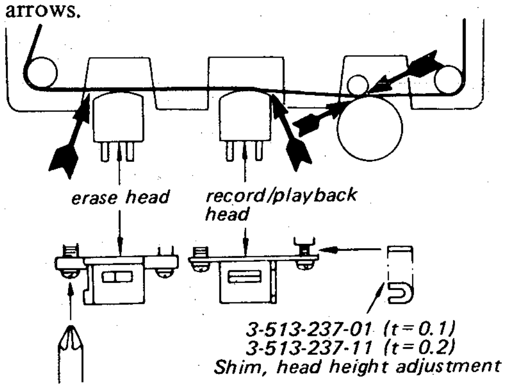
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Head Height Adjustment

1. Prepare an adjustment cassette as shown below.


C-120
tape cassette
Cut out hatched
portions.

2. In playback mode and viewing from the front, adjust the head heights to eliminate tape curl and tape twist at the portions shown by the arrows.

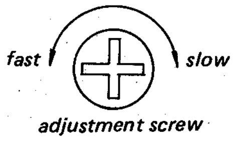

erase head
record/playback
head
3-513-237-01 (t=0.1)
3-513-237-11 (t=0.2)
Shim, head height adjustment

Soft Eject Adjustment

Specification

Eject time
0.4~2.5 sec.

Set the tape (C-90) and adjust the adjustment screw so that the specified EJECT TIME is obtained.

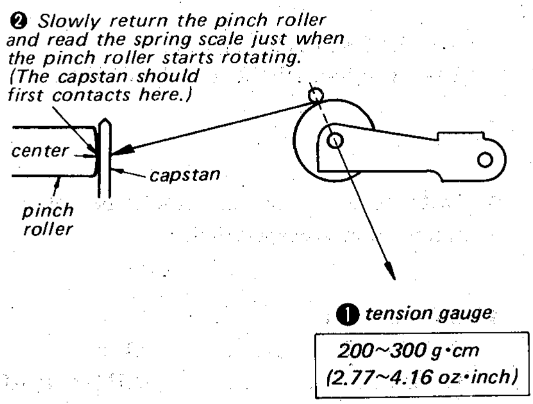

fast
slow
adjustment screw

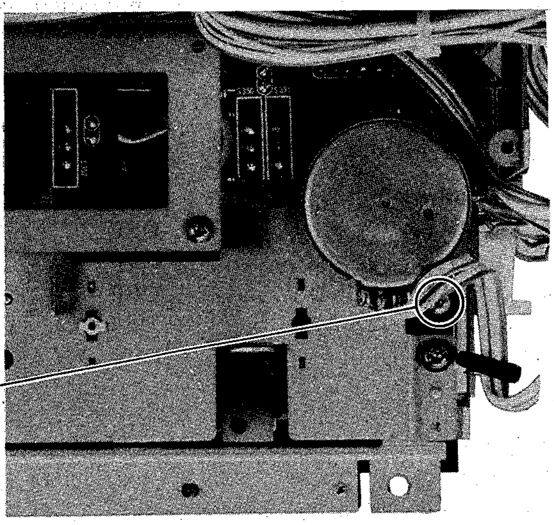
Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	30~50 g·cm (0.41~0.69 oz·inch)
Back Tension	CQ-102C	2.5~5 g·cm (0.03~0.06 oz·inch)
Fast Forward and Rewind	CQ-201B	80~165 g·cm (1.1~2.0 oz·inch)

Pinch Roller Pressure Measurement

– Playback Mode –


❷ Slowly return the pinch roller and read the spring scale just when the pinch roller starts rotating. (The capstan should first contacts here.)
center
capstan
pinch
roller
❶ tension gauge
200~300 g·cm
(2.77~4.16 oz·inch)



3-2. ELECTRICAL ADJUSTMENTS

Note: 1. The adjustment should be performed in the order given in this service manual.

2. The adjustments of the deck A section should be performed after removing it from the set.

3. The adjustments should be performed for both L-CH and R-CH.

- Set the TAPE switches according to the tape as follows.

DECK A section

Tape	TAPE switch	LED display
CS-15	AUTO	I: NORM
CS-25	AUTO	II: CrO_2
CS-40	AUTO	Same as TYPE II

DECK B section

Tape	TAPE switch	LED display
CS-15	AUTO	I: NORM
CS-25	AUTO	II: CrO_2
CS-40	AUTO/METAL	IV: METAL

* TYPE III Fe-Cr is the same as
TYPE I either DECK A and DECK B.

- Switches and controls should be set as follows unless otherwise specified.

DECK A section
DOLBY NR .... OFF
TAPE .... AUTO (I: NORM)
PITCH CONTROL ...... Mechanical mid-position (at center click)

DECK B section
DOLBY NR .... OFF
TAPE .... AUTO (I: NORM)

The others
TIMER .... OFF
EQ .... OFF
SPACE SOUND .... OFF

- Standard Record:
  Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Standard Input Level

	CD/AUX
source impedance	10kΩ
input level	0.25V (−10dB)

Standard Output Level

	TP (LINE OUT)
load impedance	47kΩ
output level	0.435V (−5dB)

DECK A section

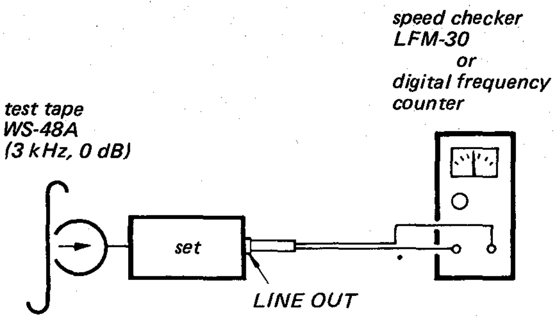
Speed Adjustment

Setting:

FUNCTION button . . . . TAPE
MASTER VOLUME knob. . . . . Mechanical mid-position

Procedure:

Mode: playback

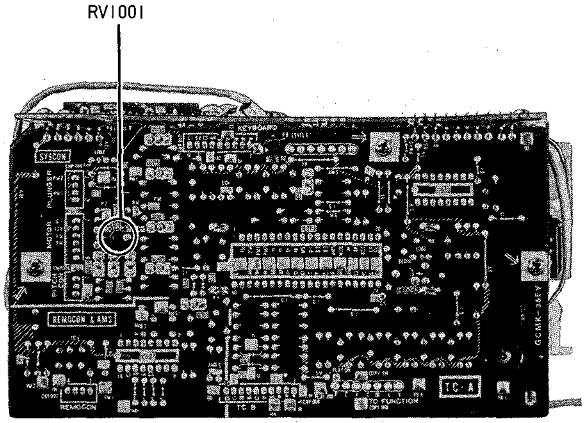

speed checker
LFM-30
or
digital frequency counter
test tape
WS-48A
(3 kHz, 0 dB)
set
LINE OUT

Specification:

Speed checker	Digital frequency counter
–0.8 to +0.8%	2,975 to 3,025Hz

Frequency difference between the beginning and the end of the tape should be within 0.8% (25Hz).

Adjustment Location: TC (A) system control board

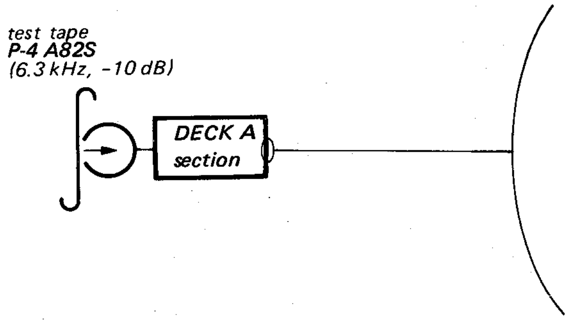

RV1001
SYSCON
REMOCON & AMS
KEYBOARD
TC-A
TC FUNCTION
REMOCON

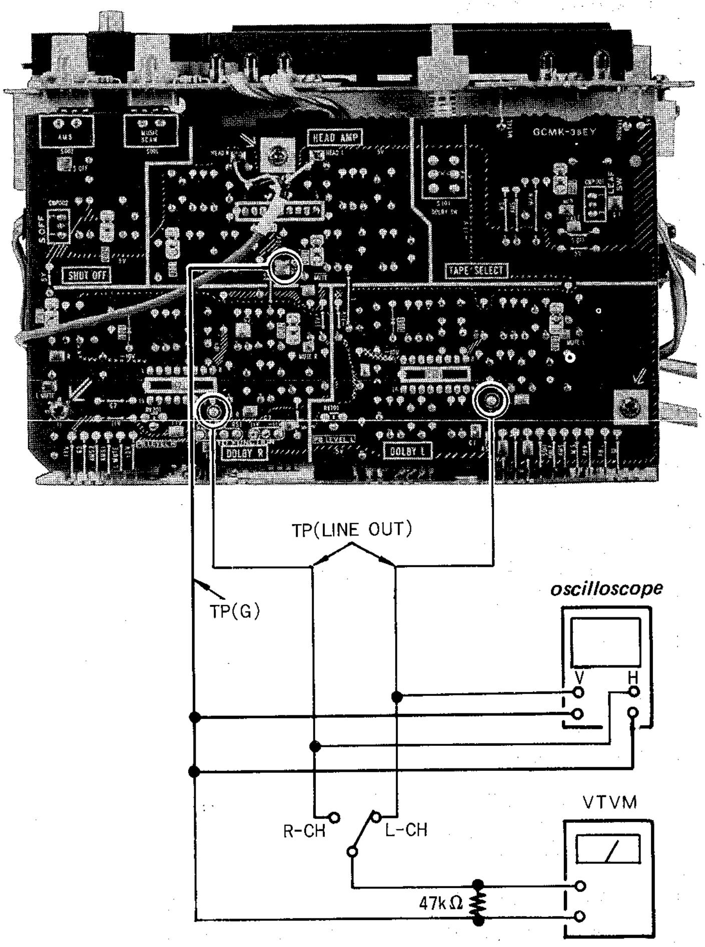
DECK A section **NOTE:** The adjustments should be performed after removing DECK A section from the set.

Record/playback Head Azimuth Adjustment

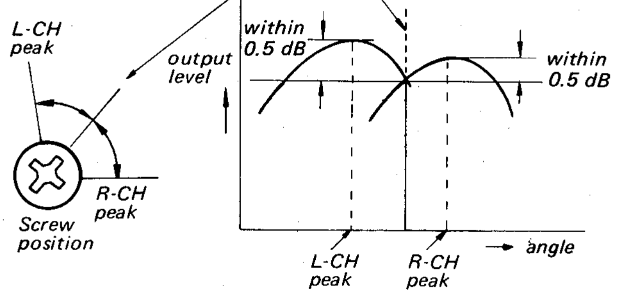
Procedure:

1. Mode: playback

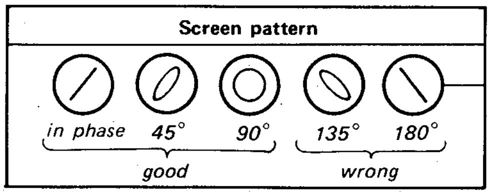

test tape
P-4 A82S
(6.3 kHz, -10 dB)
DECK A section


HEAD AMP
TAPE SELECT
SHUT OFF
DOLBY R
DOLBY L
TP(LINE OUT)
TP(G)
oscilloscope
V
H
VTVM
R-CH
L-CH
47kΩ

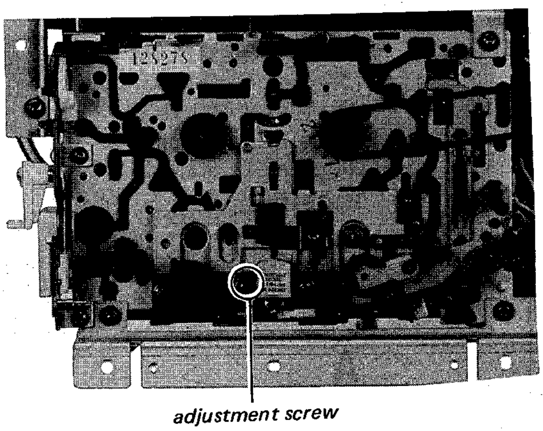
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.



3. Phase Check


Screen pattern
in phase
45°
90°
135°
180°
good
wrong

Adjustment Location:


adjustment screw

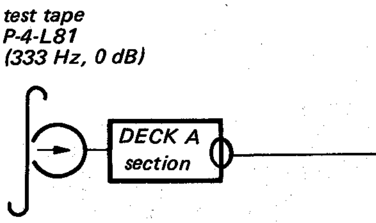
DECK A section

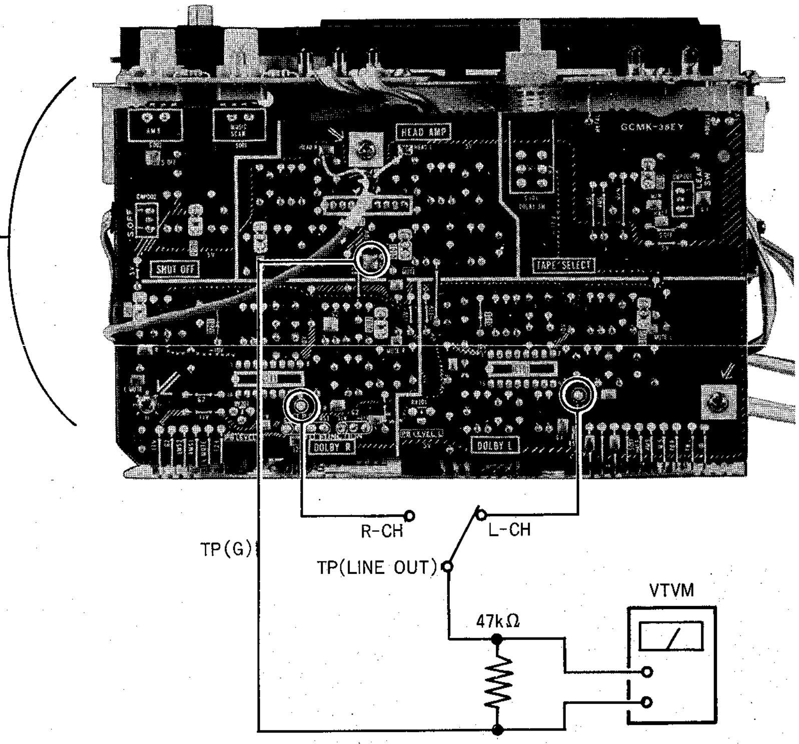
NOTE: The adjustment should be performed after removing DECK A section from the set.

Playback Level Adjustment

Procedure:

Mode: playback


test tape
P-4-L81
(333 Hz, 0 dB)
DECK A section

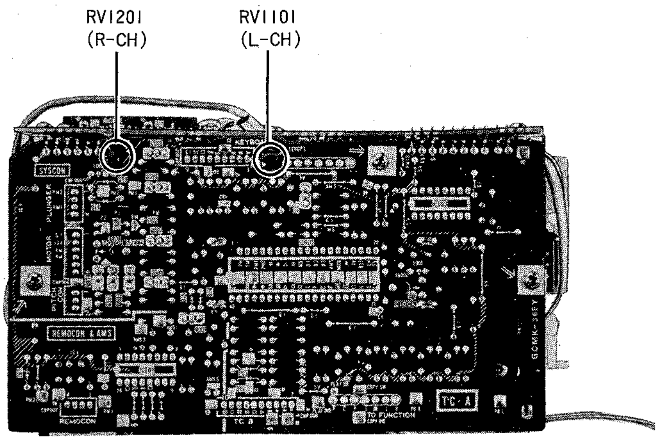

HEAD AMP
GCMK-36EY
SHUT OFF
TAPE SELECT
DOLBY R
DOLBY L
R-CH
L-CH
TP(G)
TP(LINE OUT)
47kΩ
VTVM

Specification:

LINE OUT level: 0.41 to 0.46 V
(−5.5 to −4.5 dB)
Level difference between channels:
less than 0.5 dB

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location: TC (A) System control board


RV1201
(R-CH)
RV1101
(L-CH)
SYSCON
REMOCON & AMS
TC-A

DECK A section

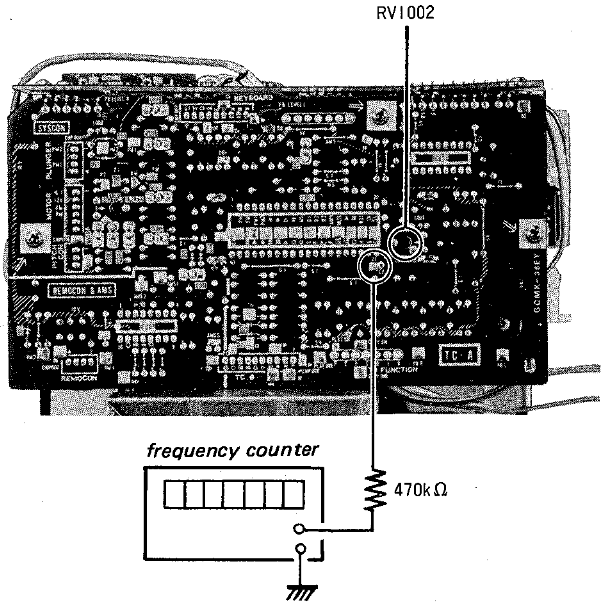
Clock Adjustment

Procedure:

1. Connect the frequency counter to terminal ㉑ (T.P) of the IC1002.
2. Adjust RV1002 for 200kHz reading on the frequency counter.

NOTE: The input impedance of the frequency counter should be more than 1MΩ.

Adjustment Location: TC (A) system control board


RV1002
frequency counter
470kΩ

METER section

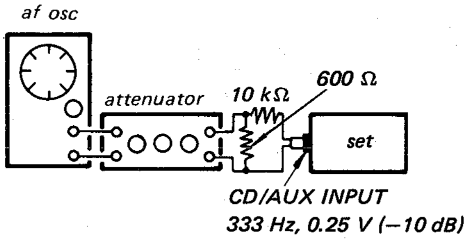
Level Meter Calibration

Setting:

FUNCTION button: CD/AUX

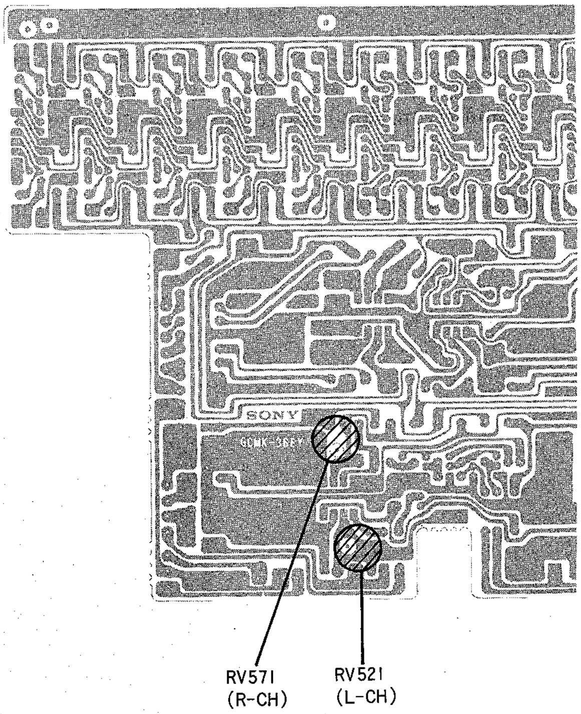
Procedure:

1. Mode: record


af osc
attenuator
10 kΩ
600 Ω
set
CD/AUX INPUT
333 Hz, 0.25 V (−10 dB)

2. Adjust RV521 and RV571 so that the light in the 0dB segment from the left of the LED meter goes on.

Adjustment Location: Graphic equalizer board (Conductor side)


SONY
RV571
(R-CH)
RV521
(L-CH)

DECK B section

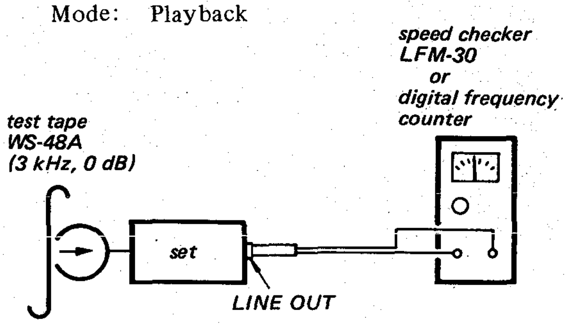
Capstan Motor Speed Adjustment

Setting:

FUNCTION button: TAPE
MASTER VOLUME knob: Mechanical mid-position

Procedure:

Mode: Playback

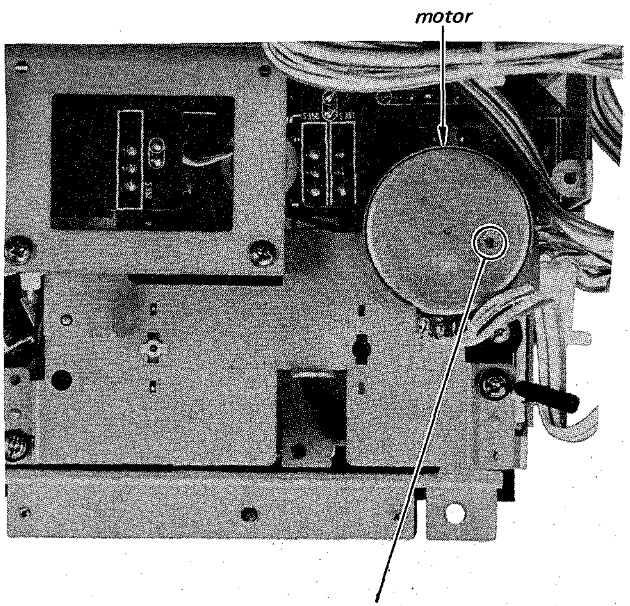

speed checker
LFM-30
or
digital frequency counter
test tape
WS-48A
(3 kHz, 0 dB)
set
LINE OUT

Specification:

Speed checker	Digital frequency counter
0.8 to 0.8%	2.975 to 3.025 Hz

Frequency difference between the beginning and the end of the tape should be within 0.8% (25Hz).

Adjustment Location:



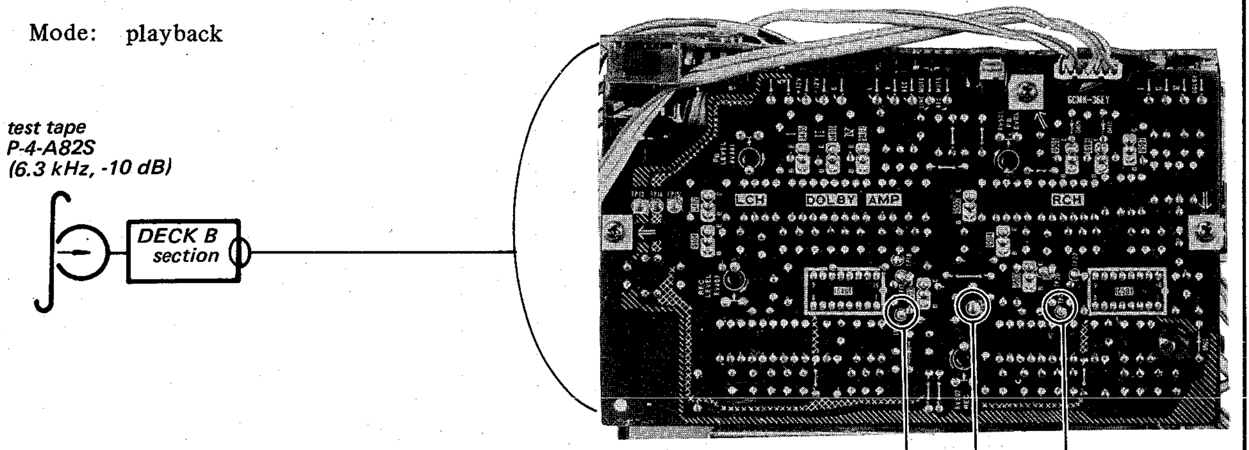
Adjust the speed by using screwdriver. When turning the screw clockwise, speed is faster.

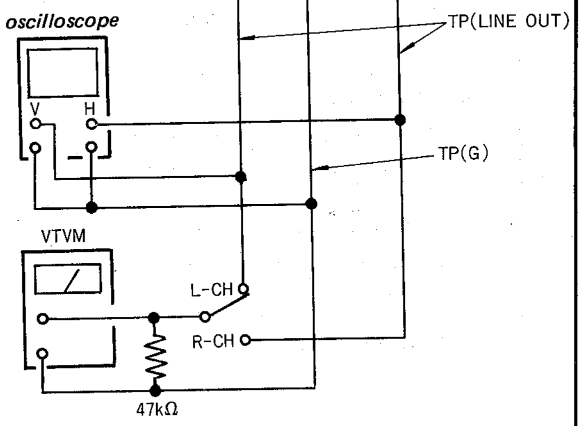
DECK B section

Record/playback Head Azimuth Adjustment

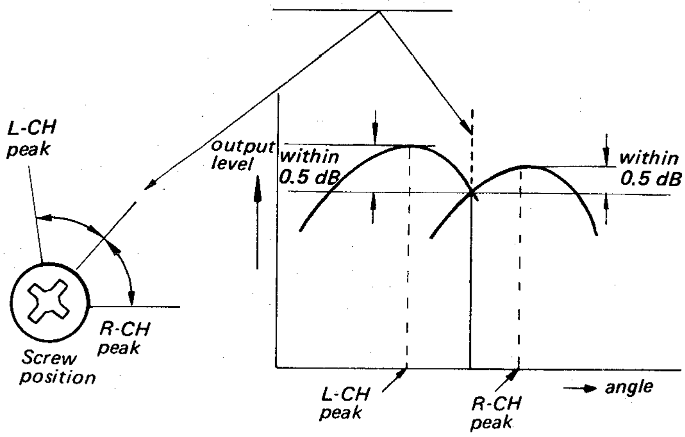
Procedure:

1. Mode: playback

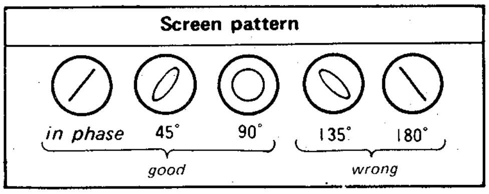

test tape
P-4-A82S
(6.3 kHz, -10 dB)
DECK B
section

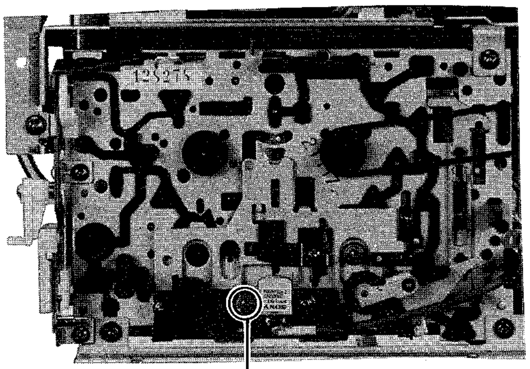

oscilloscope
TP(LINE OUT)
V
H
TP(G)
VTVM
L-CH
R-CH
47kΩ

2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.


L-CH
peak
Screw
position
R-CH
peak
output
level
within
0.5 dB
within
0.5 dB
L-CH
peak
R-CH
peak
angle

3. Phase Check


Screen pattern
in phase
45°
90°
135°
180°
good
wrong



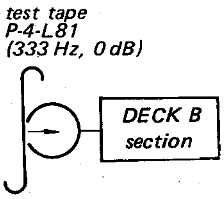
adjustment screw

DECK B section

Playback Level Adjustment

Procedure:

Mode: playback

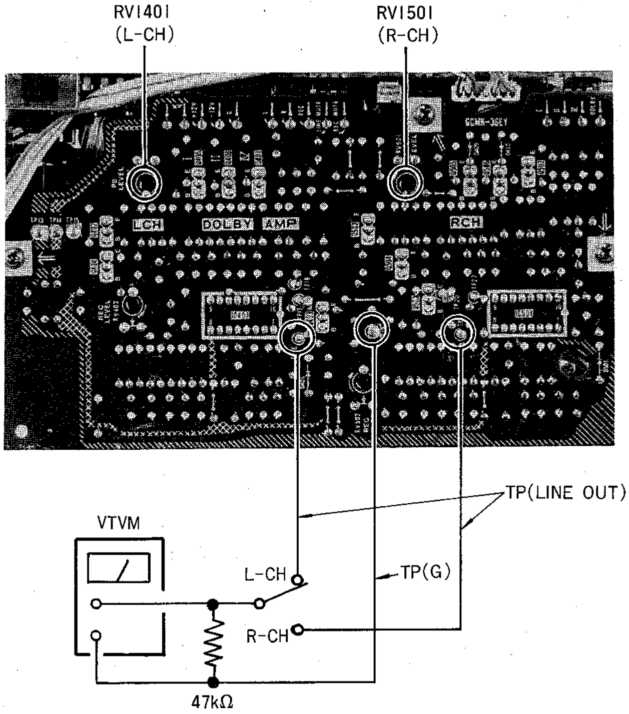

test tape
P-4-L81
(333 Hz, 0 dB)
DECK B
section

Specification:

LINE OUT level: 0.41 to 0.46 V
(–5.5 to –4.5 dB)
Level difference between channels:
less than 0.5 dB

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location: TC (B) audio board


RV1401
(L-CH)
RV1501
(R-CH)
TP(LINE OUT)
VTVM
L-CH
TP(G)
R-CH
47kΩ

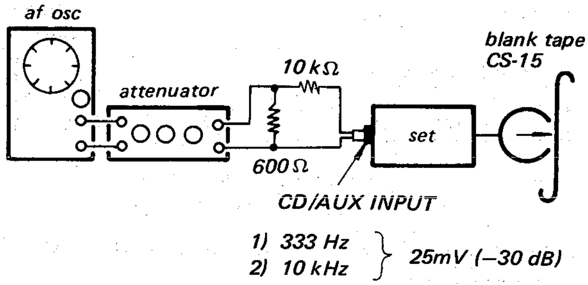
Record Bias Adjustment

Setting:

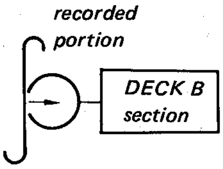
FUNCTION button: CD/AUX

Procedure:

1. Mode: record

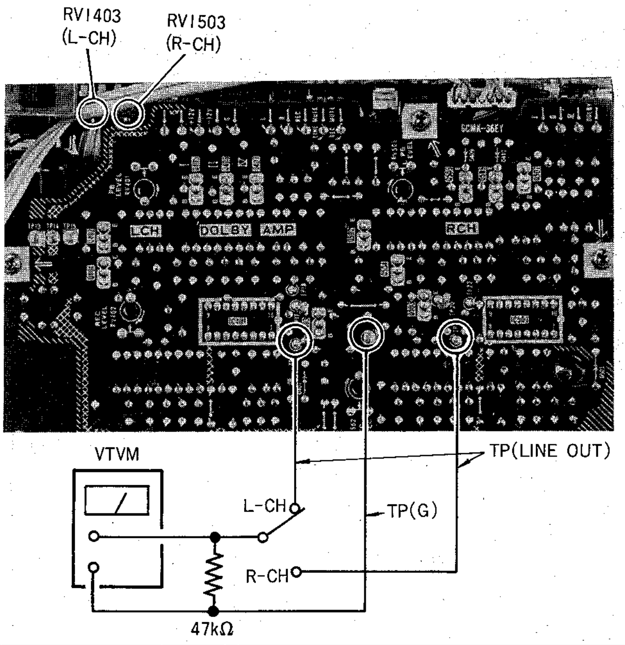

af osc
attenuator
10 kΩ
600 Ω
set
blank tape
CS-15
CD/AUX INPUT
1) 333 Hz
2) 10 kHz
25mV (–30 dB)

2. Set the REC LEVEL knob so that the LED meter indicates 0 dB with –10 dB INPUT signal, and change the INPUT signal to –30dB.
   Record 333Hz and 10kHz signals.
3. Mode: playback


recorded
portion
DECK B
section

Adjust RV1403 (L-CH), RV1503 (R-CH) so that the LINE OUT level of 333 Hz signal is 0 dB relative to that of 10 kHz.

Adjustment Location: TC (B) audio board


RV1403
(L-CH)
RV1503
(R-CH)
VTVM
TP(LINE OUT)
L-CH
TP(G)
R-CH
47kΩ

DECK B section

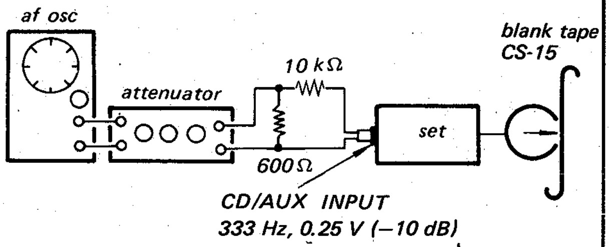
Record Level Adjustment

Setting:

FUNCTION button: CD/AUX

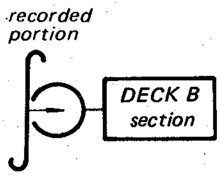
Procedure:

1. Mode: record


af osc
attenuator
10 kΩ
600Ω
set
blank tape
CS-15
CD/AUX INPUT
333 Hz, 0.25 V (−10 dB)

2. Set the REC LEVEL knob so that the LED meter indicates 0 dB.

3. Mode: playback

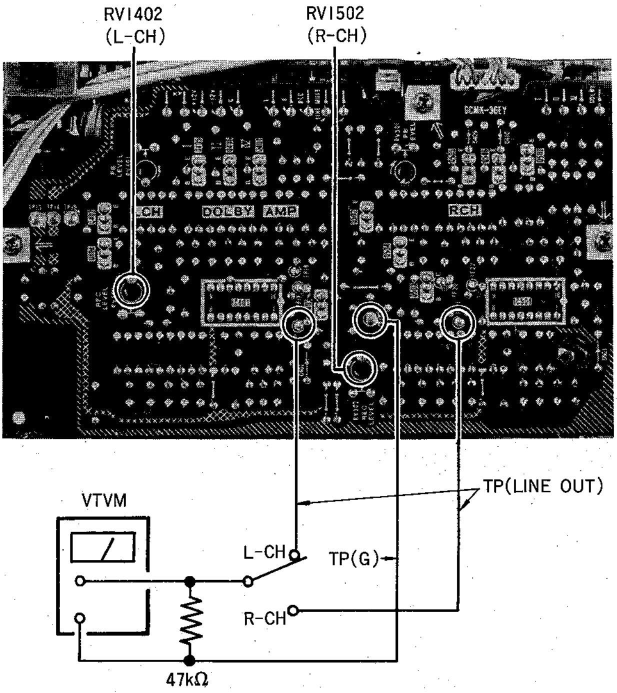

recorded
portion
DECK B
section

Specification:

LIEN OUT level: 0.39 to 0.49 V
(−6 to −4 dB)

Adjustment Location:

TC (B) audio board


RV1402
(L-CH)
RV1502
(R-CH)
TP(LINE OUT)
VTVM
L-CH
TP(G)
R-CH
47kΩ

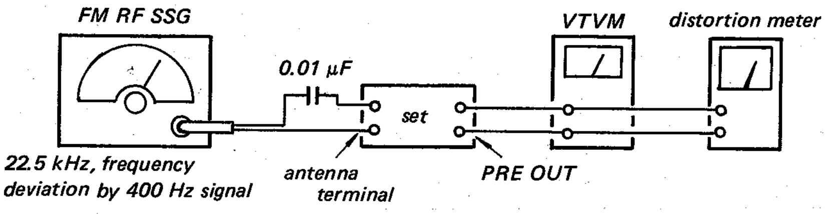
TUNER section

FM

- **Setting:**

  FUNCTION button: TUNER
  Band Switch: FM
  FM MODE Switch: STEREO

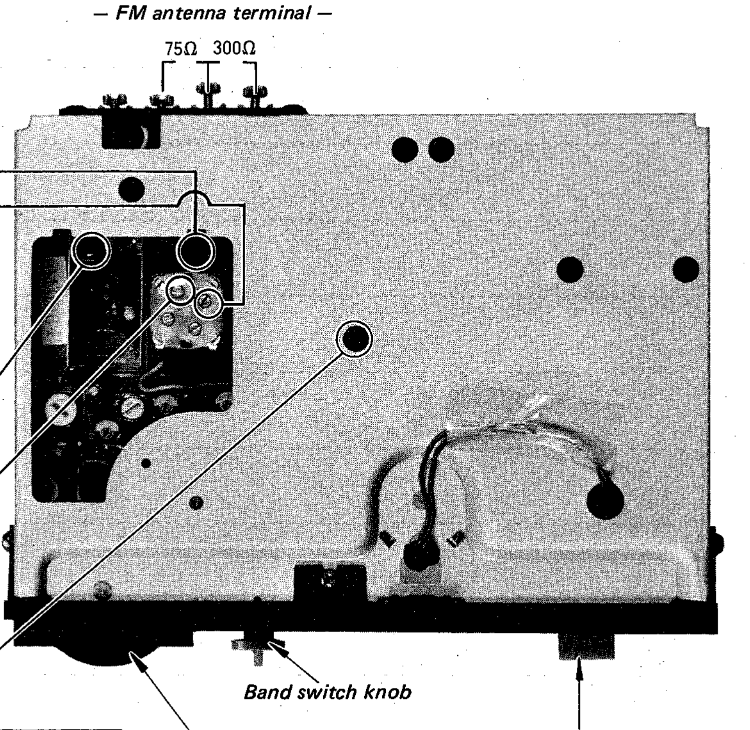
- **Procedure:**


FM RF SSG
0.01 µF
set
VTVM
distortion meter
22.5 kHz, frequency deviation by 400 Hz signal
antenna terminal
PRE OUT

- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

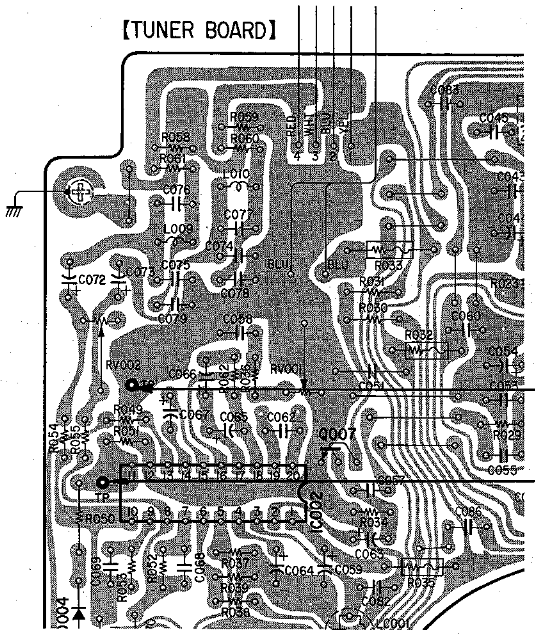
FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
87.1 MHz	L001
109.5 MHz	CT001

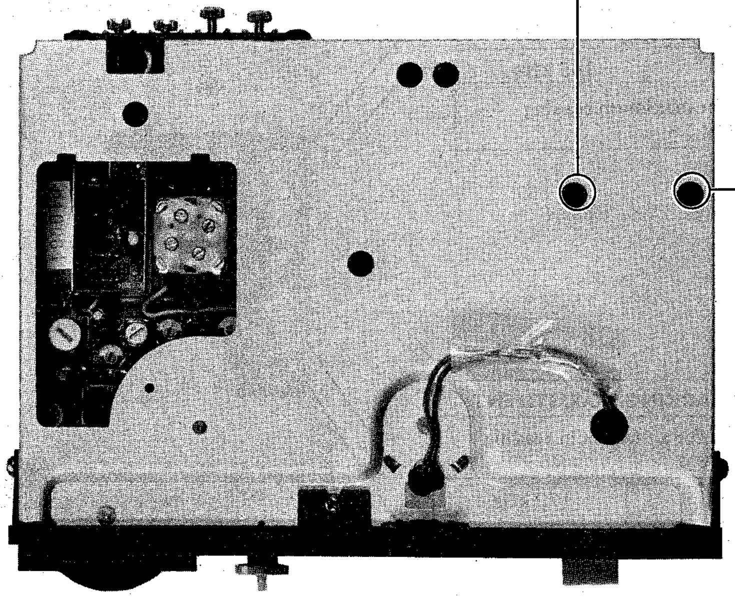
FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
87.1 MHz	L002
109.5 MHz	CT002


– FM antenna terminal –
75Ω
300Ω
L006
Band switch knob
FM MODE switch button
TUNING knob
f max
f min

DISTORTION ADJUSTMENT

Adjust L006 for the minimum distortion on the distortion meter. (Output level of the signal generator: 60 dB [1 mV]).

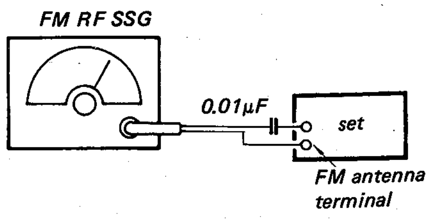

【TUNER BOARD】
RV001
RV002
Q007
TP


RV001
RV002

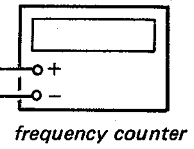
VCO Adjustment

A) Regular Method

Procedure:


FM RF SSG
0.01μF
set
FM antenna terminal

Carrier frequency: *98MHz*
Modulation: *No modulation*
Output level: *1mV (60dB)*

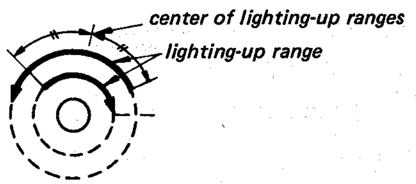

+
−
frequency counter

1. Tune the set to 98MHz.
2. Adjust RV001 for 19kHz ±20Hz on the counter.

B) Simple Method

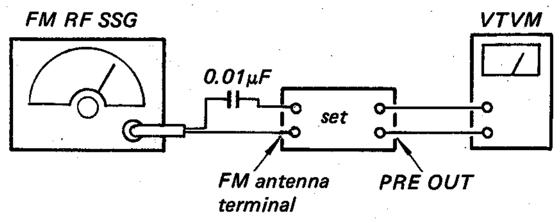
Procedure:

1. Tune the set to the FM stereo broadcasting signal.
2. Turn RV001 clockwise or counterclockwise and memorize the lighting-up range of the stereo lamp.
3. Secure RV001 at the center of the lighting-up range of both turns as shown below.


center of lighting-up ranges
lighting-up range

FM Stereo Separation Adjustment

Procedure:


FM RF SSG
0.01μF
set
VTVM
FM antenna terminal
PRE OUT

Carrier frequency: *98MHz*
Output level: *1mV (60dB)*
Mode: *stereo*
Modulation:
Audio (1kHz): *16.25kHz deviation (40%)*
Pilot (19kHz): *7.5kHz deviation (20%)*
Subchannel (38kHz): 16.25kHz deviation (40%)

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV002 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV002 for minimum reading.

L-CH Stereo Separation: Ⓐ − Ⓑ
R-CH Stereo Separation: Ⓒ − Ⓓ

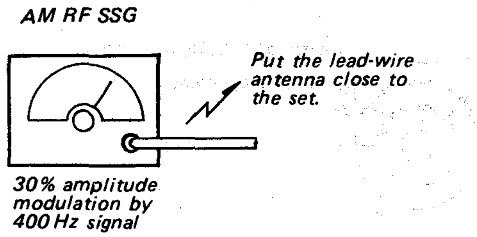
The separations of both channels should be equal.

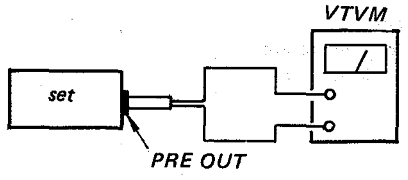
MW

- **Setting:**

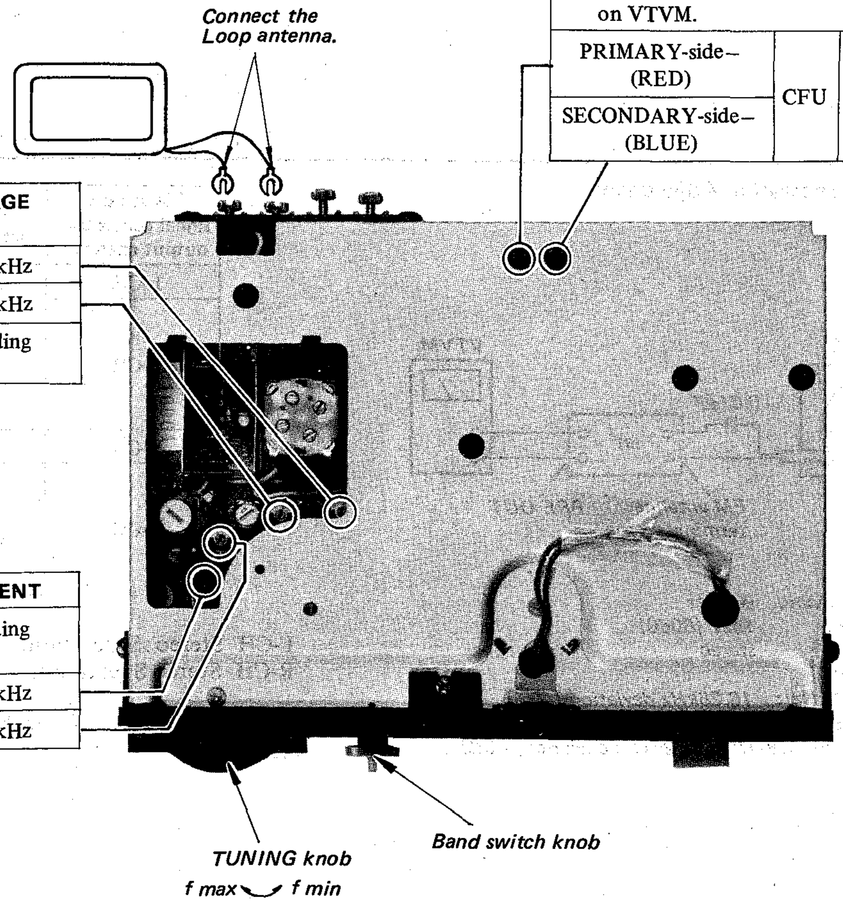
  FUNCTION button: TUNER
  Band Switch: MW

- **Procedure:**


AM RF SSG
Put the lead-wire antenna close to the set.
30% amplitude modulation by 400 Hz signal


VTVM
set
PRE OUT

- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.


Connect the Loop antenna.
TUNING knob
f max f min
Band switch knob

AM IF ALIGNMENT		
Adjust for a maximum reading on VTVM.		
PRIMARY-side–(RED)	CFU	450 kHz
SECONDARY-side–(BLUE)		

MW FREQUENCY COVERAGE ADJUSTMENT	
CT004	1,660 kHz
L005	515 kHz
Adjust for a maximum reading on VTVM.	

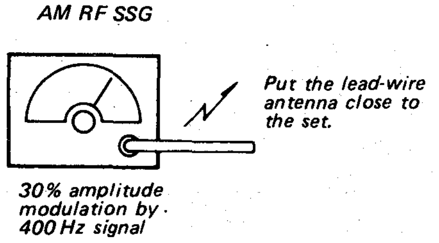
MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L004	600 kHz
CT003	1,400 kHz

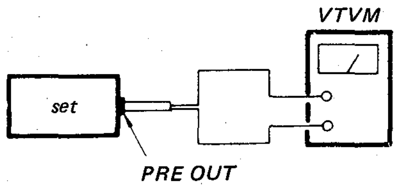
LW

- **Setting:**

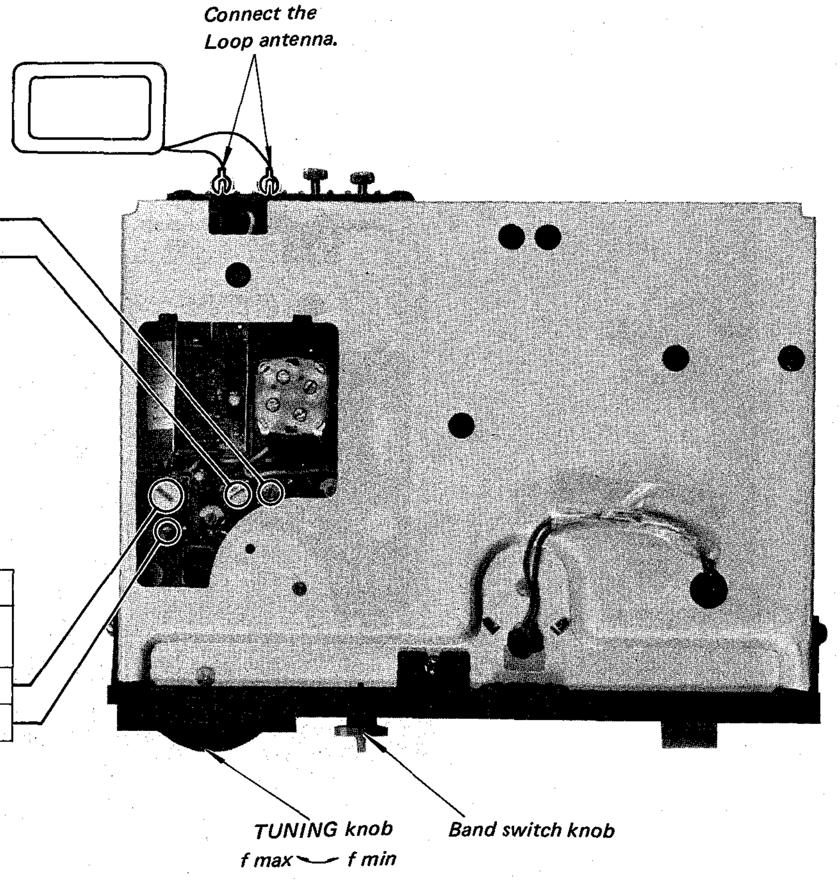
  FUNCTION button: TUNER
  Band Switch: LW

- **Procedure:**


AM RF SSG
Put the lead-wire antenna close to the set.
30% amplitude modulation by 400 Hz signal


VTVM
set
PRE OUT

- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.


Connect the Loop antenna.
TUNING knob
f max f min
Band switch knob

LW FREQUENCY COVERAGE ADJUSTMENT	
CT006	365 kHz
CT008	145 kHz
Adjust for maximum reading on VTVM.	

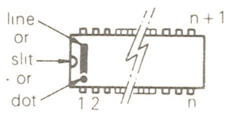
LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L007	170 kHz
CT005	310 kHz

SECTION 4
DIAGRAMS

4-1. MOUNTING DIAGRAM
— Tuner section —

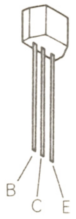
Semiconductor Lead Layouts

LA3390

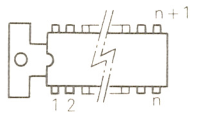

line
or
slit
or
dot
n+1
1 2
n

(Top view)

2SC2458

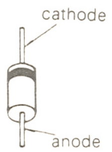


CX168-2

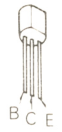


(Top view)

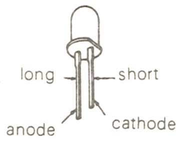
1S1555


cathode
anode

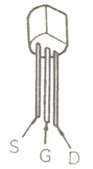
2SC710-13
2SC710-14



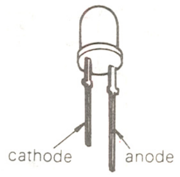
PR5534S


long
short
anode
cathode

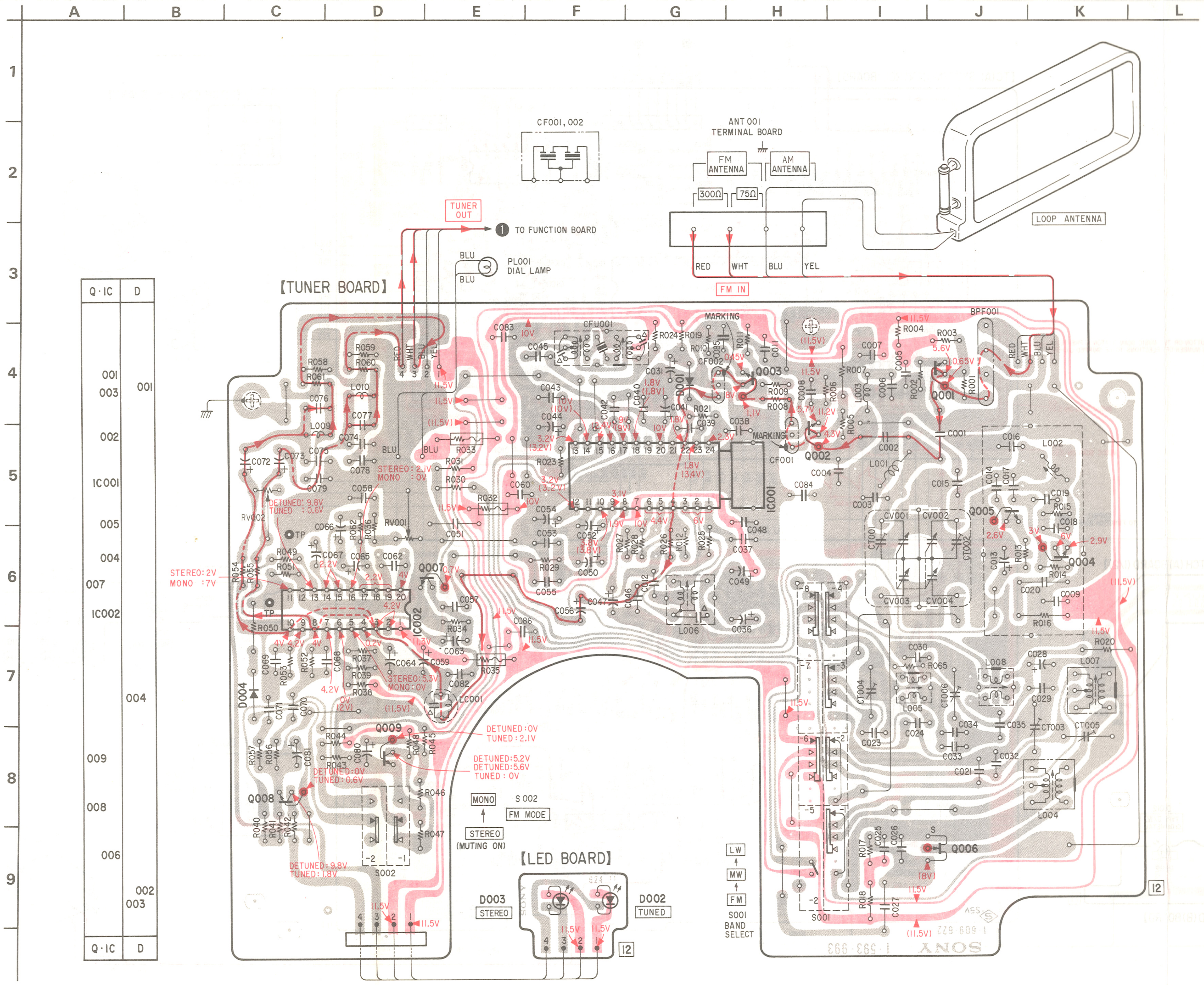
2SK107-4



SLH-54PC3


cathode
anode

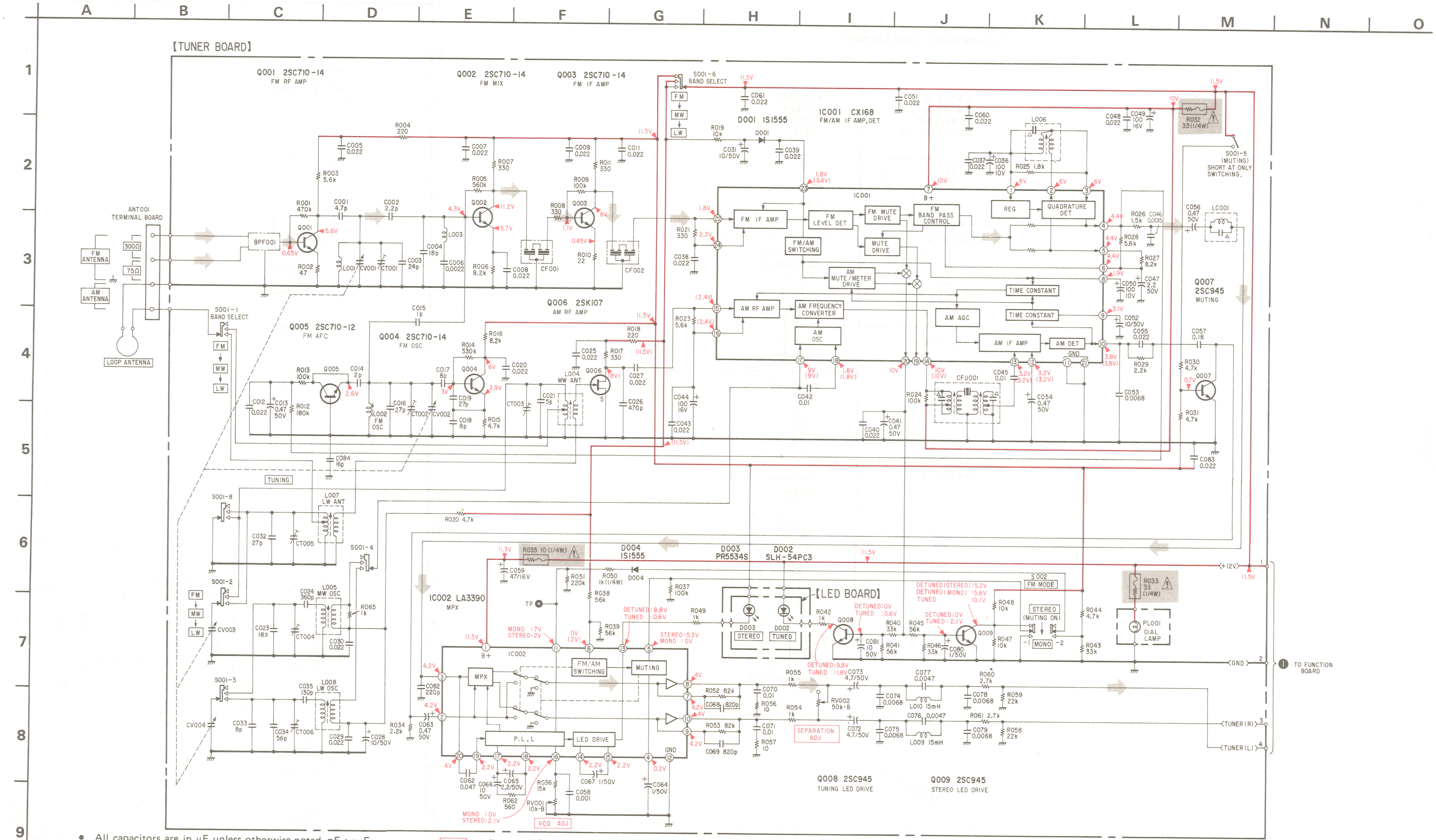
- ● ○— : parts extracted from the component side.
- ● ▨ : B + pattern
- ● ▬▬➔▬ : signal path
- ● ▬▬·▬➔ : L-CH signal path
- ● ▬▬··➔ : R-CH signal path


A
B
C
D
E
F
G
H
I
J
K
L
1
2
3
4
5
6
7
8
9
CF001, 002
ANT 001
TERMINAL BOARD
FM ANTENNA
AM ANTENNA
300Ω
75Ω
LOOP ANTENNA
TUNER OUT
① TO FUNCTION BOARD
PL001
DIAL LAMP
BLU
RED
WHT
YEL
FM IN
[TUNER BOARD]
MARKING
BPF001
CFU001
IC001
IC002
Q001
Q002
Q003
Q004
Q005
Q006
Q007
Q008
Q009
D001
D004
STEREO: 2.1V
MONO : 0V
DETUNED: 9.8V
TUNED : 0.6V
STEREO: 2V
MONO : 7V
STEREO: 5.3V
MONO : 0V
DETUNED: 0V
TUNED: 2.1V
DETUNED: 5.2V
DETUNED: 5.6V
TUNED : 0V
DETUNED: 0V
TUNED: 0.6V
DETUNED: 9.8V
TUNED: 1.8V
MONO
S002
FM MODE
STEREO
(MUTING ON)
[LED BOARD]
D003
STEREO
D002
TUNED
LW
MW
FM
S001
BAND
SELECT
11.5V
(11.5V)
12
SONY
1-583-993

Q·IC	D
001 003	001
002 IC001	
005 004 007 IC002	
	004
009 008	
006	002 003
Q·IC	D

4-2. SCHEMATIC DIAGRAM

– *Tuner section* –


A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
1
2
3
4
5
6
7
8
9
10
【TUNER BOARD】
Q001 2SC710-14 FM RF AMP
Q002 2SC710-14 FM MIX
Q003 2SC710-14 FM IF AMP
S001-6 BAND SELECT
FM
MW
LW
D001 IS1555
IC001 CX168 FM/AM IF AMP, DET
ANT001 TERMINAL BOARD
FM ANTENNA
AM ANTENNA
LOOP ANTENNA
300Ω
75Ω
BPF001
CF001
CF002
L003
FM IF AMP
FM LEVEL DET
FM MUTE DRIVE
FM BAND PASS CONTROL
REG
QUADRATURE DET
FM/AM SWITCHING
MUTE DRIVE
AM MUTE/METER DRIVE
AM RF AMP
AM FREQUENCY CONVERTER
AM OSC
AM AGC
TIME CONSTANT
AM IF AMP
AM DET
CFU001
L006
LC001
S001-5 (MUTING) SHORT AT ONLY SWITCHING.
R032 33(1/4W)
Q007 2SC945 MUTING
Q006 2SK107 AM RF AMP
Q005 2SC710-12 FM AFC
Q004 2SC710-14 FM OSC
S001-1 BAND SELECT
L002 FM OSC
L004 MW ANT
TUNING
S001-8
L007 LW ANT
S001-4
S001-2
L005 MW OSC
S001-3
L008 LW OSC
CV001
CT001
CV002
CT002
CV003
CV004
R020 4.7k
R035 10 (1/4W)
D004 IS1555
D003 PR5534S
D002 SLH-54PC3
IC002 LA3390 MPX
MPX
FM/AM SWITCHING
MUTING
P.L.L
LED DRIVE
【LED BOARD】
STEREO
TUNED
S002 FM MODE
STEREO (MUTING ON)
MONO
R033 33 (1/4W)
PL001 DIAL LAMP
Q008 2SC945 TUNING LED DRIVE
Q009 2SC945 STEREO LED DRIVE
SEPARATION ADJ
VCO ADJ
RV001 10k-B
RV002 50k-B
L009 15mH
L010 15mH
(+12V)
(GND)
(TUNER (R))
(TUNER (L))
TO FUNCTION BOARD
11.5V
MONO : 0V STEREO : 2.1V
DETUNED : 9.8V TUNED : 0.6V
DETUNED (STEREO) : 5.2V DETUNED (MONO) : 5.6V TUNED : 0.1V

- All capacitors are in µF unless otherwise noted. pF : µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼W, ⅙W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- ⌇⌇⌇ : fusible resistor.
- △ : internal component.
- ▭ : panel designation.

- ▭ : adjustment for repair.
- —— : B+ bus.
- Readings are taken under no-signal conditions with a VOM (50kΩ/V).
  No mark : FM
  ( ) : AM
- ➡ : signal path

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

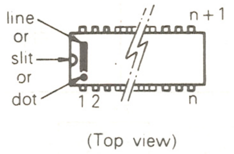
Note: Voltages are measured with a VOM (50kΩ/V).

4-3. MOUNTING DIAGRAM

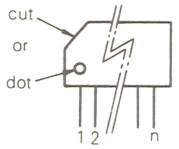
— *Deck A section* —

Semiconductor Lead Layouts

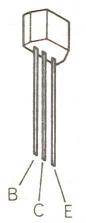
CX174-2
CX10034
TC4049BP
μPD7508C-032


line
or
slit
or
dot
n+1
1 2
n
(Top view)

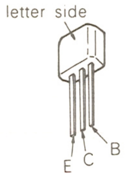
TA7325P


cut
or
dot
1 2
n

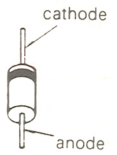
2SC2458



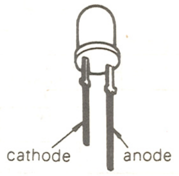
2SA1175


letter side
E
C
B

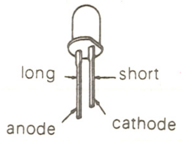
HZ11A3L
1S1555
1SS119
10E-2


cathode
anode

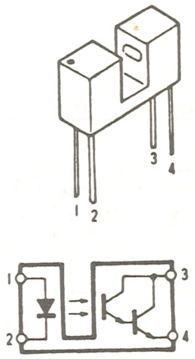
SLH-54DC3
SLH-54PC3


cathode
anode

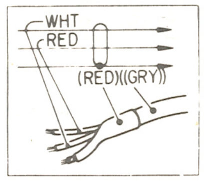
PR5534S


long
short
anode
cathode

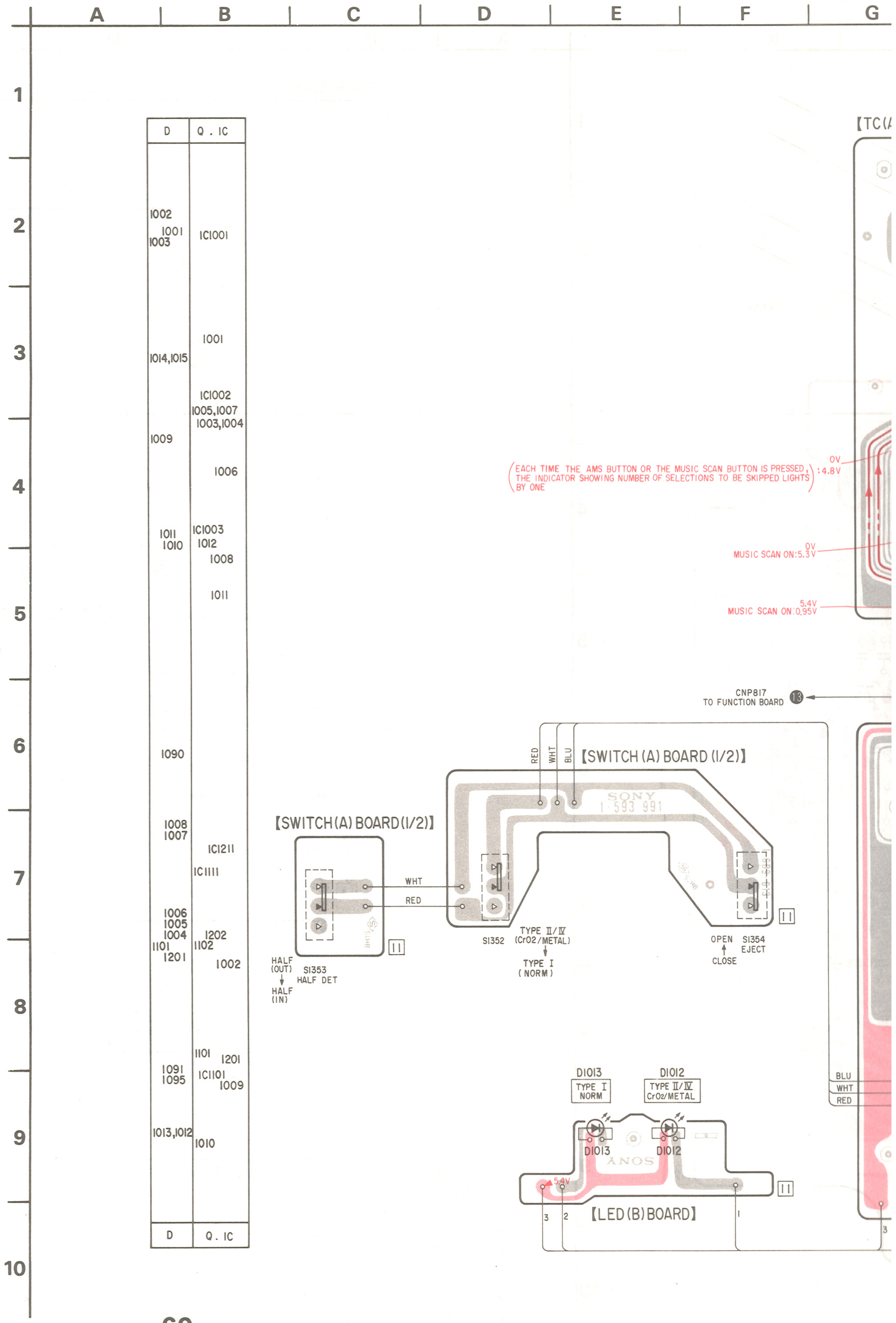
SPI201-A



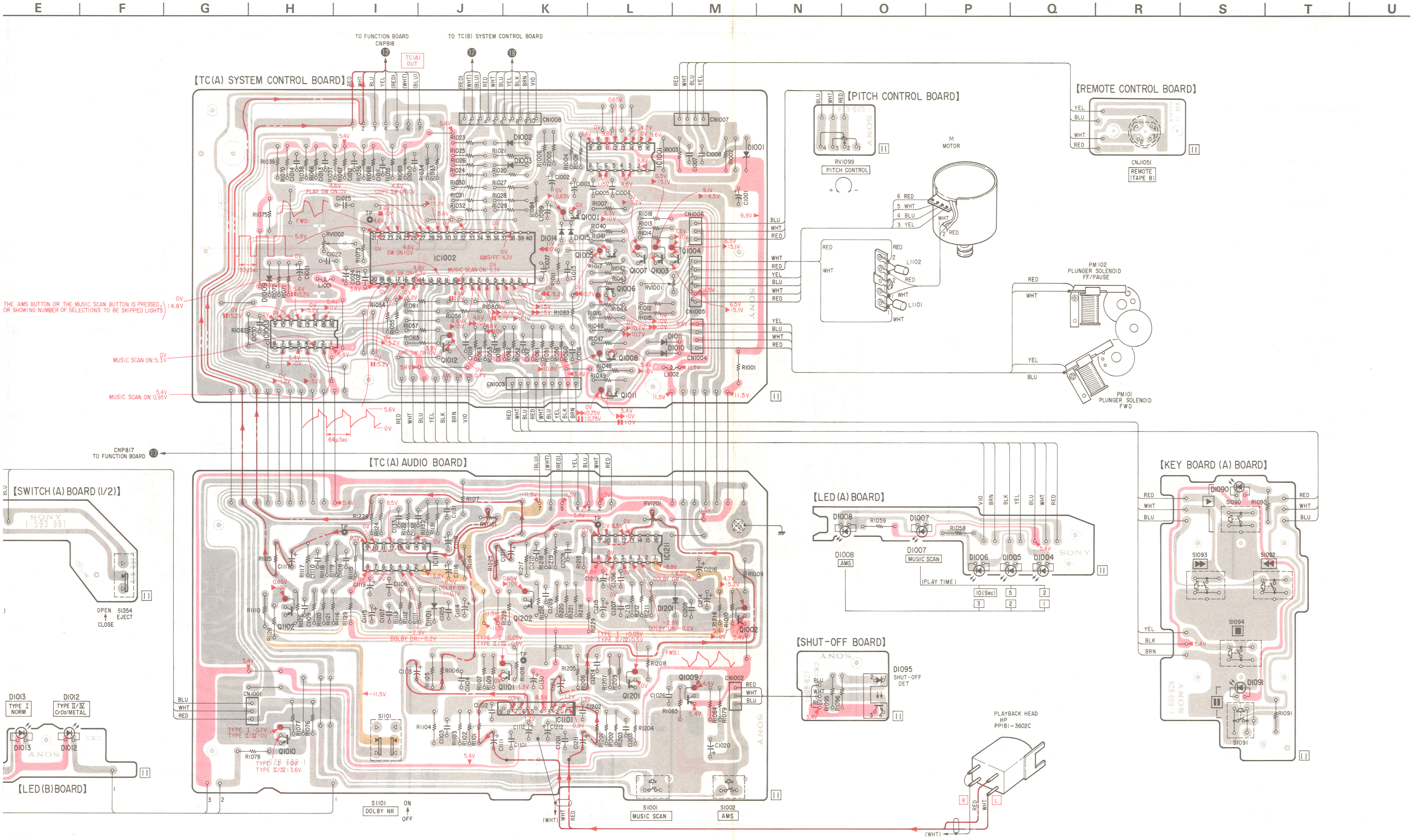
- Color code of sleeving over the end of the jacket.


WHT
RED
(RED)(GRY)

- ○—: parts extracted from the component side.
- ▨ : B+ pattern
- ▨ : B- pattern
- ▬▬➡▬ : signal path
- ▬▬▬➡ : L-CH signal path
- ▬▬▬➡ : R-CH signal path

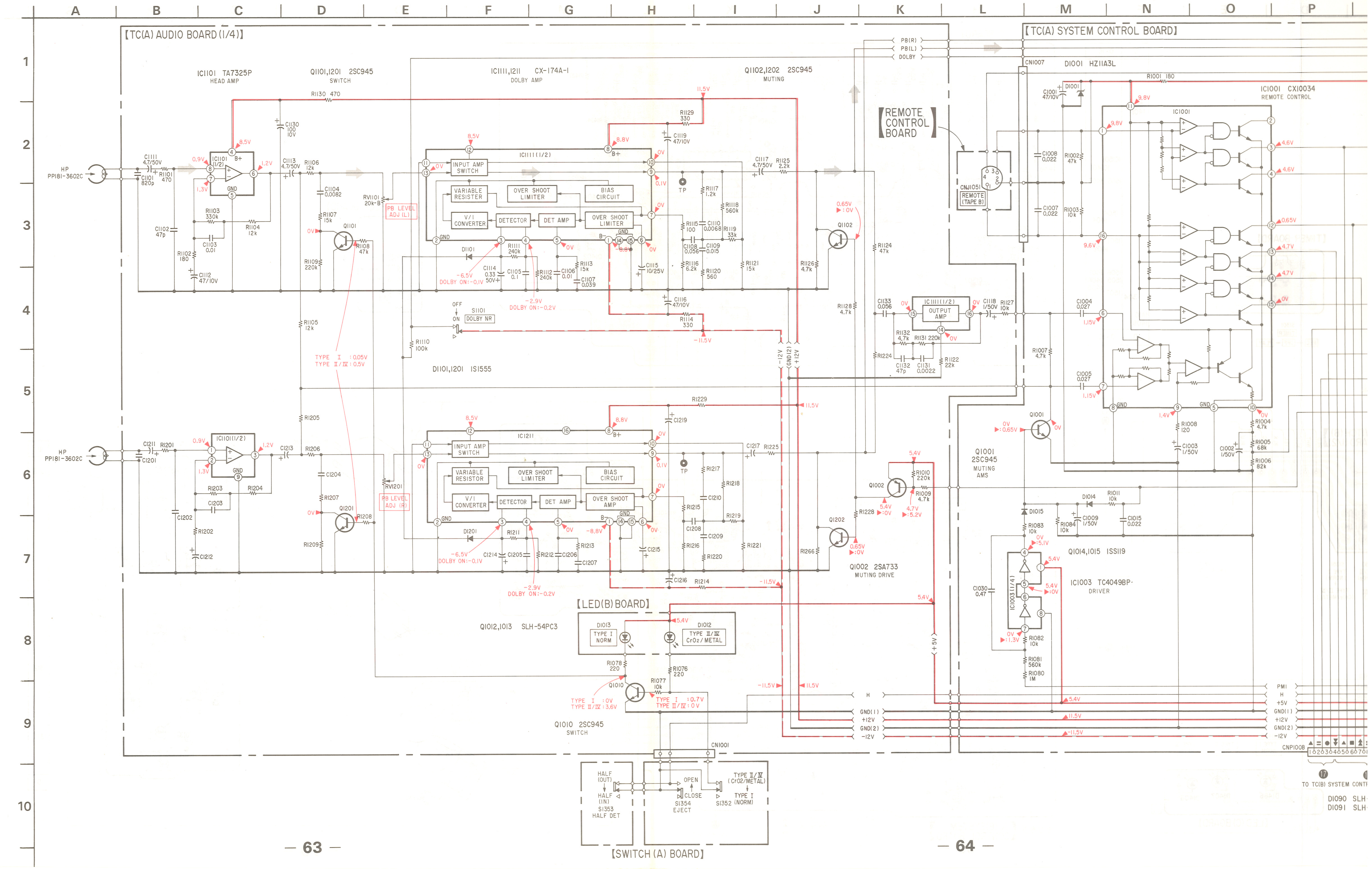

A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
[TC(
EACH TIME THE AMS BUTTON OR THE MUSIC SCAN BUTTON IS PRESSED, THE INDICATOR SHOWING NUMBER OF SELECTIONS TO BE SKIPPED LIGHTS BY ONE
0V
: 4.8V
0V
MUSIC SCAN ON: 5.3V
5.4V
MUSIC SCAN ON: 0.95V
CNP817
TO FUNCTION BOARD
⑬
RED
WHT
BLU
【SWITCH (A) BOARD (1/2)】
SONY
1-593-991
【SWITCH (A) BOARD (1/2)】
WHT
RED
HALF (OUT)
HALF (IN)
S1353
HALF DET
S1352
TYPE Ⅱ/Ⅳ (CrO2/METAL)
TYPE Ⅰ (NORM)
OPEN
CLOSE
S1354
EJECT
D1013
TYPE Ⅰ NORM
D1012
TYPE Ⅱ/Ⅳ CrO2/METAL
D1013
D1012
SONY
5.4V
3
2
1
【LED (B) BOARD】
BLU
WHT
RED
3

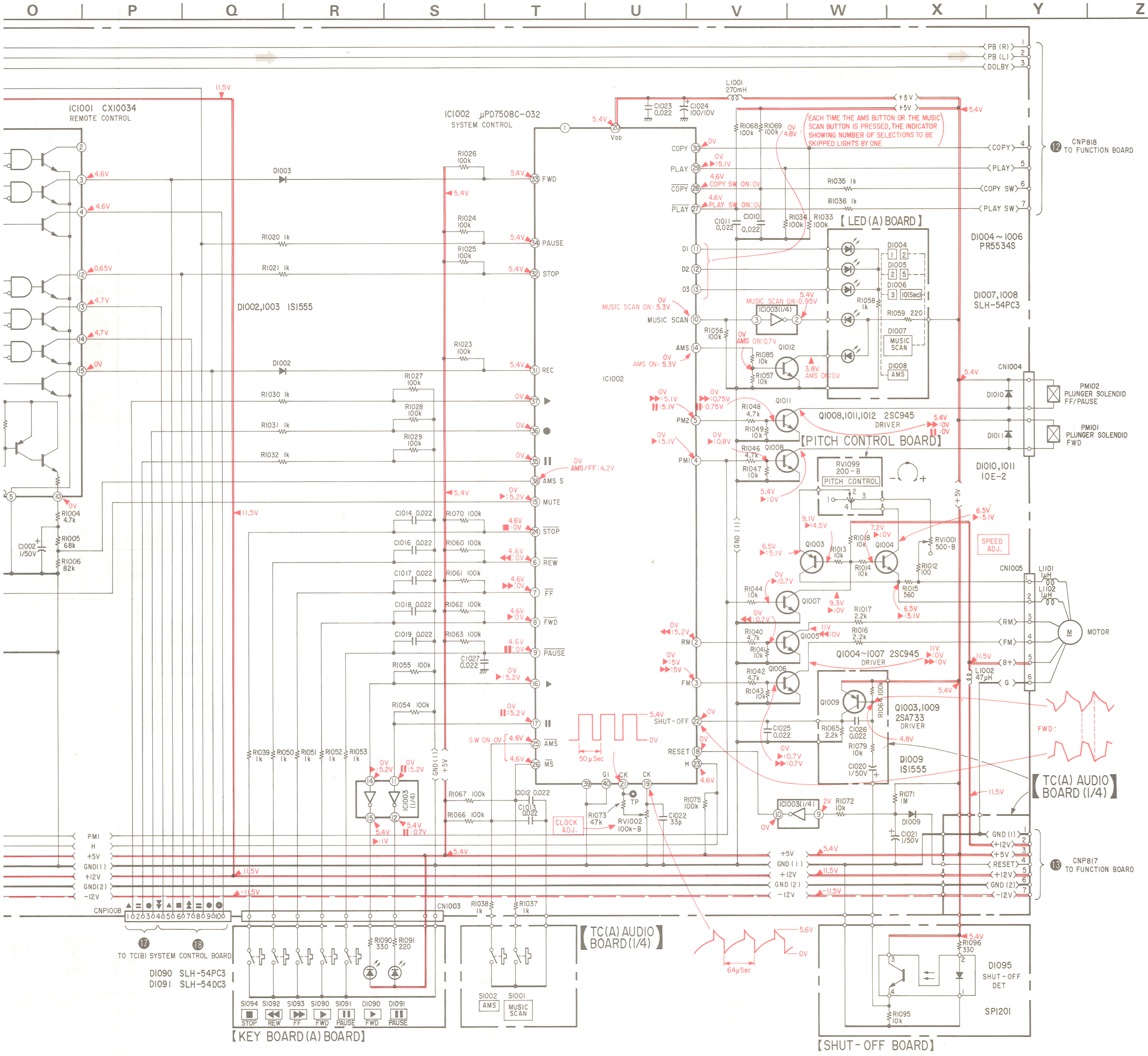
	D	Q . IC
1		
2	1002 1001 1003	IC1001
3	1014,1015	1001
4	1009	IC1002 1005,1007 1003,1004 1006
5	1011 1010	IC1003 1012 1008 1011
6	1090	
7	1008 1007 1006 1005 1004	IC1211 IC1111 1202
8	1101 1201	1102 1002
9	1091 1095 1013,1012	1101 1201 IC1101 1009 1010
10		
	D	Q . IC


E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U
TO FUNCTION BOARD
CNP818
⑫
TC(A) OUT
TO TC(B) SYSTEM CONTROL BOARD
⑰
⑱
[TC(A) SYSTEM CONTROL BOARD]
[PITCH CONTROL BOARD]
RV1099
PITCH CONTROL
M
MOTOR
[REMOTE CONTROL BOARD]
CNJ1051
REMOTE (TAPE B)
PM102
PLUNGER SOLENOID
FF/PAUSE
PM101
PLUNGER SOLENOID
FWD
L1102
L1101
IC1002
CN1008
CN1007
CN1006
CN1005
CN1004
CN1003
THE AMS BUTTON OR THE MUSIC SCAN BUTTON IS PRESSED, OR SHOWING NUMBER OF SELECTIONS TO BE SKIPPED LIGHTS
MUSIC SCAN ON:5.3V
MUSIC SCAN ON:0.95V
PLAY SW ON:0V
COPY SW ON:0V
AMS SW ON:5.3V
MUSIC SCAN ON:5.3V
AMS/FF:4.2V
64μSec
30μSec
CNP817
TO FUNCTION BOARD
⑬
[TC(A) AUDIO BOARD]
[SWITCH (A) BOARD (1/2)]
OPEN S1354 EJECT CLOSE
D1013
TYPE I NORM
D1012
TYPE II/IV CrO2/METAL
[LED (B) BOARD]
IC1101
IC1201
Q1101
Q1201
Q1010
CN1001
CN1002
S1101
DOLBY NR
ON
OFF
DOLBY ON:-0.2V
TYPE I:0.05V
TYPE II/IV:0.5V
TYPE I:0.7V
TYPE II/IV:0V
TYPE I:0V
TYPE II/IV:3.6V
S1001
MUSIC SCAN
S1002
AMS
[LED (A) BOARD]
D1008
AMS
D1007
MUSIC SCAN
D1006
D1005
D1004
(PLAY TIME)
10(Sec)
5
2
3
2
1
[SHUT-OFF BOARD]
D1095
SHUT-OFF DET
PLAYBACK HEAD
HP
PP181-3602C
[KEY BOARD (A) BOARD]
D1090
S1090
R1090
S1093
S1092
S1094
D1091
S1091
R1091
(WHT)
RED
WHT
BLU
YEL
BLK
BRN
VIO

4-4. SCHEMATIC DIAGRAM

– Deck A section –


A B C D E F G H I J K L M N O P
1 2 3 4 5 6 7 8 9 10
[TC(A) AUDIO BOARD (1/4)]
[TC(A) SYSTEM CONTROL BOARD]
[REMOTE CONTROL BOARD]
[LED(B) BOARD]
[SWITCH (A) BOARD]
IC1101 TA7325P HEAD AMP
Q1101,1201 2SC945 SWITCH
IC1111,1211 CX-174A-1 DOLBY AMP
Q1102,1202 2SC945 MUTING
D1001 HZ11A3L
IC1001 CX10034 REMOTE CONTROL
HP PP181-3602C
INPUT AMP SWITCH
VARIABLE RESISTOR
OVER SHOOT LIMITER
BIAS CIRCUIT
V/I CONVERTER
DETECTOR
DET AMP
OVER SHOOT LIMITER
OVER SHOOT AMP
OUTPUT AMP
PB LEVEL ADJ (L)
PB LEVEL ADJ (R)
RV1101 20k-B
RV1201
S1101 DOLBY NR
OFF ON
TP
D1101,1201 1S1555
TYPE I : 0.05V
TYPE II/IV : 0.5V
DOLBY ON : -0.1V
DOLBY ON : -0.2V
CNJ1051 REMOTE (TAPE B)
CN1007
PB(R) PB(L) DOLBY
Q1001 2SC945 MUTING AMS
Q1002 2SA733 MUTING DRIVE
Q1014,1015 1SS119
IC1003 TC4049BP DRIVER
Q1012,1013 SLH-54PC3
D1013 TYPE I NORM
D1012 TYPE II/IV CrO2/METAL
Q1010 2SC945 SWITCH
TYPE I : 0V
TYPE II/IV : 3.6V
TYPE I : 0.7V
TYPE II/IV : 0V
CN1001
HALF (OUT)
HALF (IN)
S1353 HALF DET
OPEN
CLOSE
S1354 EJECT
TYPE II/IV (CrO2/METAL)
TYPE I (NORM)
S1352
H +5V GND(1) +12V GND(2) -12V
PM1
CNP1008
TO TC(B) SYSTEM CONT
D1090 SLH
D1091 SLH
11.5V 8.5V 8.8V 0.9V 1.2V 1.3V 0V 0.1V -6.5V -2.9V -8.8V -11.5V 9.8V 4.6V 4.7V 0.65V 9.6V 1.15V 1.4V 5.4V 5.2V 5.1V 1.3V


O
P
Q
R
S
T
U
V
W
X
Y
Z
A1
B1
C1
D1
IC1001 CX10034
REMOTE CONTROL
IC1002 μPD7508C-032
SYSTEM CONTROL
D1002,1003 1S1555
L1001 270mH
C1023 0.022
C1024 100/10V
EACH TIME THE AMS BUTTON OR THE MUSIC SCAN BUTTON IS PRESSED, THE INDICATOR SHOWING NUMBER OF SELECTIONS TO BE SKIPPED LIGHTS BY ONE
PB (R)
PB (L)
DOLBY
COPY
PLAY
COPY SW
PLAY SW
⑫ CNP818 TO FUNCTION BOARD
[LED (A) BOARD]
D1004~1006 PR5534S
D1007,1008 SLH-54PC3
CN1004
PM102 PLUNGER SOLENOID FF/PAUSE
PM101 PLUNGER SOLENOID FWD
D1010,1011 10E-2
Q1008,1011,1012 2SC945 DRIVER
[PITCH CONTROL BOARD]
RV1099 200-B PITCH CONTROL
SPEED ADJ.
RV1001 500-B
CN1005
L1101 1μH
L1102 1μH
MOTOR
Q1004~1007 2SC945 DRIVER
Q1003,1009 2SA733 DRIVER
D1009 1S1555
FWD
[TC(A) AUDIO BOARD (1/4)]
⑬ CNP817 TO FUNCTION BOARD
GND (1)
+12V
+5V
RESET
GND (2)
-12V
CLOCK ADJ.
50μSec
64μSec
SHUT-OFF
RESET
CNP1008
⑰ ⑱ TO TC(B) SYSTEM CONTROL BOARD
D1090 SLH-54PC3
D1091 SLH-54DC3
S1094 STOP
S1092 REW
S1093 FF
S1090 FWD
S1091 PAUSE
D1090 FWD
D1091 PAUSE
[KEY BOARD (A) BOARD]
S1002 AMS
S1001 MUSIC SCAN
D1095 SHUT-OFF DET
SP1201
[SHUT-OFF BOARD]

- Components for right channel have same values as for left channel. Reference numbers are coded from 1200.
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, $\frac{1}{4}$ W, $\frac{1}{6}$ W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- ▭ : panel designation.
- ▭ : adjustment for repair.
- ——— : B+ bus.
- – – – : B- bus.
- Readings are taken under no-signal conditions with a VOM (50kΩ/V).
  No mark : STOP
  ▶ : FWD
  ▶▶ : FF
  ◀◀ : REW
  ❚❚ : PAUSE
- ⇨ : signal path

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

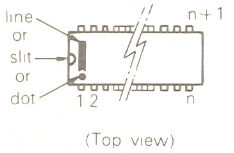
Note: Voltages are measured with a VOM (50kΩ/V).

4-5. MOUNTING DIAGRAM

— Deck B section —

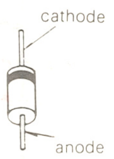
Semiconductor Lead Layouts

CX174-2
TC9310N-001

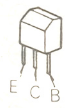

line
or
slit
or
dot
n+1
1 2
n

(Top view)

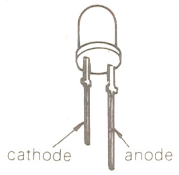
1S1555
10E-2


cathode
anode

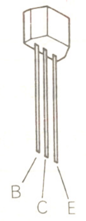
2SD774



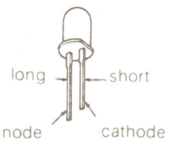
SLH-54DC3
SLH-54PC3


cathode
anode

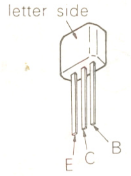
2SC2458
2SC2458L-BL



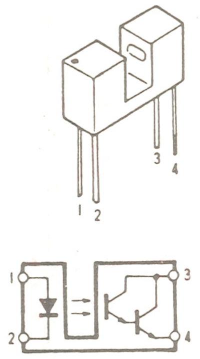
PR5534S


long
short
anode
cathode

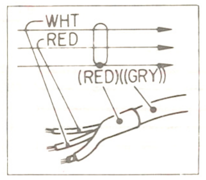
2SA1175


letter side
E C B

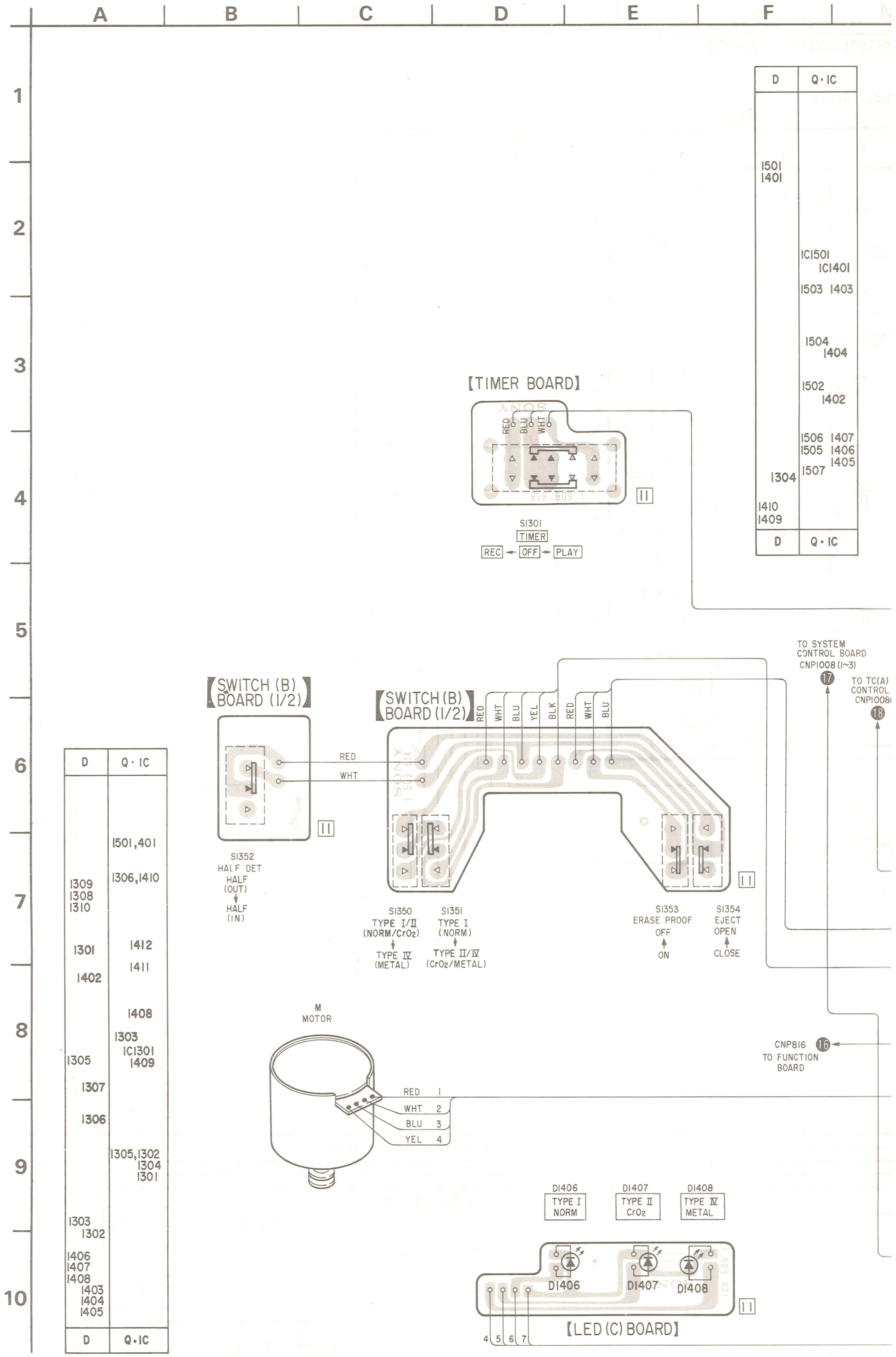
SPI201-A

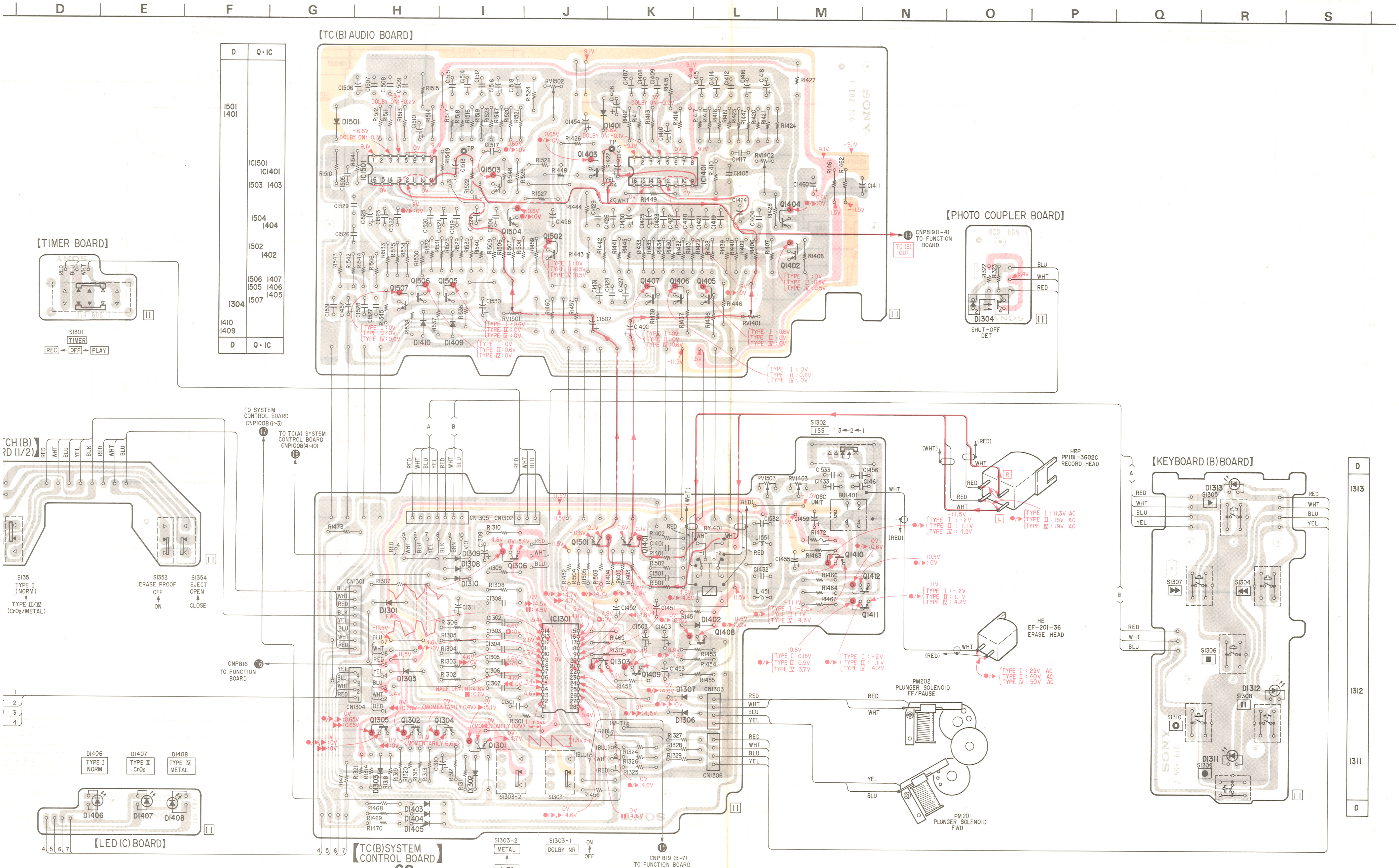


- Color code of sleeving over the end of the jacket.


WHT
RED
(RED)(GRY)

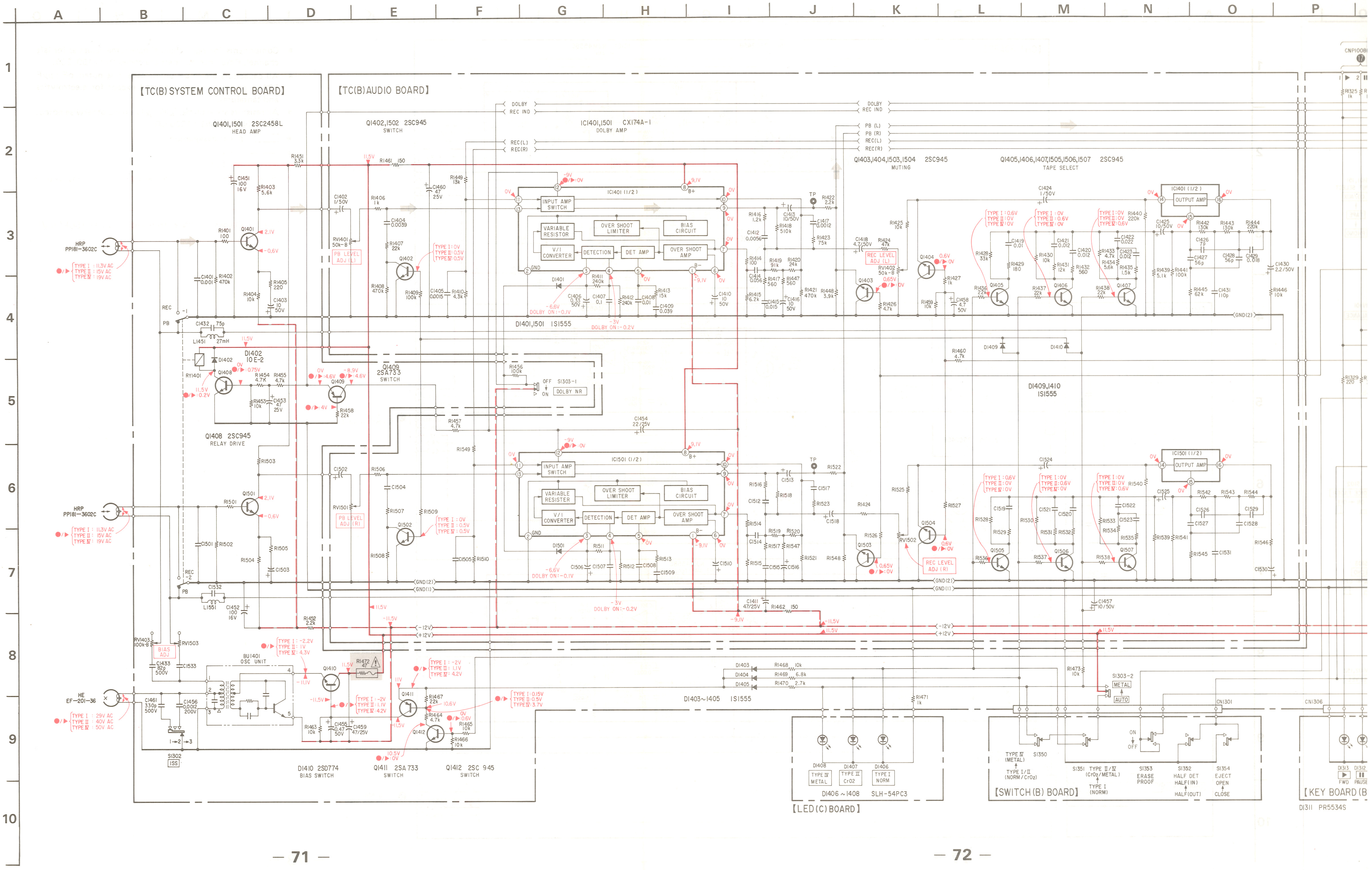
- ○—: parts extracted from the component side.
- ●—: parts extracted from the conductor side.
- ▨ : B+ pattern
- ▨ : B− pattern
- ━➡━ : signal path
- ━━━➡ : L-CH signal path
- ━━━➡ : R-CH signal path


A B C D E F
1 2 3 4 5 6 7 8 9 10
D Q·IC
1501
1401
IC1501
IC1401
1503 1403
1504
1404
1502
1402
1506 1407
1505 1406
1405
1507
1304
1410
1409
D Q·IC
[TIMER BOARD]
RED BLU WHT
S1301
TIMER
REC ← OFF → PLAY
TO SYSTEM CONTROL BOARD CNP1008 (1~3)
⑰
TO TC(A) CONTROL CNP1008
⑱
[SWITCH (B) BOARD (1/2)]
RED
WHT
S1352
HALF DET
HALF (OUT)
↕
HALF (IN)
[SWITCH (B) BOARD (1/2)]
RED WHT BLU YEL BLK RED WHT BLU
S1350
TYPE I/II (NORM/CrO2)
↕
TYPE IV (METAL)
S1351
TYPE I (NORM)
↕
TYPE II/IV (CrO2/METAL)
S1353
ERASE PROOF
OFF
↕
ON
S1354
EJECT
OPEN
↕
CLOSE
D Q·IC
1501,401
1306,1410
1309
1308
1310
1301
1412
1411
1402
1408
1303
IC1301
1409
1305
1307
1306
1305,1302
1304
1301
1303
1302
1406
1407
1408
1403
1404
1405
D Q·IC
M
MOTOR
RED 1
WHT 2
BLU 3
YEL 4
CNP816 ⑯
TO FUNCTION BOARD
D1406
TYPE I
NORM
D1407
TYPE II
CrO2
D1408
TYPE IV
METAL
D1406
D1407
D1408
4 5 6 7
[LED (C) BOARD]

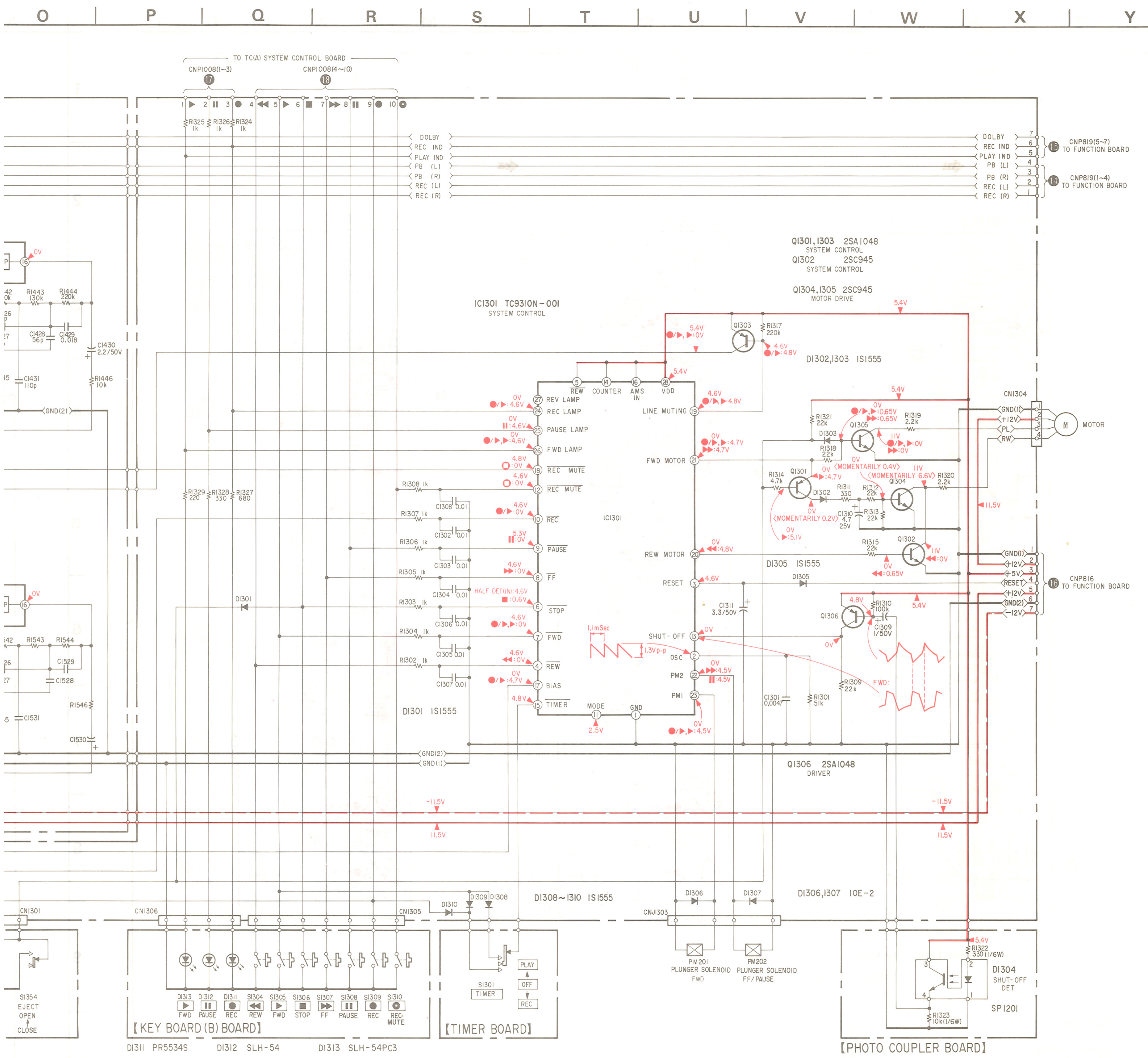

D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
[TC (B) AUDIO BOARD]
[TIMER BOARD]
S1301
TIMER
REC
OFF
PLAY
[PHOTO COUPLER BOARD]
D1304
SHUT-OFF DET
CNP819 (1~4) TO FUNCTION BOARD
TC (B) OUT
D
Q·IC
IC1501
IC1401
Q1501
Q1402
Q1403
Q1404
Q1405
Q1406
Q1407
Q1502
Q1503
Q1504
Q1505
Q1506
Q1507
D1401
D1409
D1410
D1501
RV1401
RV1402
RV1501
RV1502
DOLBY ON: -0.1V
TYPE I : 0V
TYPE II : 0.5V
TYPE IV : 0.5V
TO SYSTEM CONTROL BOARD CNP1008 (1~3)
TO TC(A) SYSTEM CONTROL BOARD CNP1006 (4~10)
⑰
⑱
⑭
⑮
⑯
CNP816 TO FUNCTION BOARD
CNP 819 (5~7) TO FUNCTION BOARD
S1351
TYPE I (NORM)
TYPE II/IV (CrO2/METAL)
S1353 ERASE PROOF
OFF
ON
S1354 EJECT
OPEN
CLOSE
S1302
ISS
3←2←1
HRP PP181-3602C RECORD HEAD
HE EF-201-36 ERASE HEAD
PM202 PLUNGER SOLENOID FF/PAUSE
PM201 PLUNGER SOLENOID FWD
[KEYBOARD (B) BOARD]
D1311
D1312
D1313
S1304
S1305
S1306
S1307
S1308
S1309
S1310
IC1301
Q1301
Q1302
Q1303
Q1304
Q1305
Q1306
Q1401
Q1402
Q1408
Q1409
Q1410
Q1411
Q1412
D1301
D1302
D1303
D1305
D1306
D1307
D1308
D1309
D1310
D1402
D1403
D1404
D1405
RY1401
BU1401
OSC UNIT
CN1301
CN1302
CN1303
CN1304
CN1305
CN1306
S1303-1
S1303-2
S1303-1 DOLBY NR
ON
OFF
S1303-2 METAL
AUTO
D1406 TYPE I NORM
D1407 TYPE II CrO2
D1408 TYPE IV METAL
[LED (C) BOARD]
[TC (B) SYSTEM CONTROL BOARD]
TYPE I : 11.3V AC
TYPE II : 15V AC
TYPE IV : 19V AC
TYPE I : 29V AC
TYPE II : 40V AC
TYPE IV : 50V AC
RED
WHT
BLU
YEL
BLK
D
1313
1312
1311
SONY

4-6. SCHEMATIC DIAGRAM

— Deck B section —



[TC(B) SYSTEM CONTROL BOARD]
[TC(B) AUDIO BOARD]
Q1401,1501 2SC2458L HEAD AMP
Q1402,1502 2SC945 SWITCH
IC1401,1501 CX174A-1 DOLBY AMP
Q1403,1404,1503,1504 2SC945 MUTING
Q1405,1406,1407,1505,1506,1507 2SC945 TAPE SELECT
HRP PP181-3602C
HE EF-201-36
INPUT AMP SWITCH
VARIABLE RESISTOR
OVER SHOOT LIMITER
BIAS CIRCUIT
V/I CONVERTER
DETECTION
DET AMP
OVER SHOOT AMP
OUTPUT AMP
IC1401 (1/2)
IC1501 (1/2)
DOLBY
REC IND
REC(L)
REC(R)
PB (L)
PB (R)
PB LEVEL ADJ (L)
PB LEVEL ADJ (R)
REC LEVEL ADJ (L)
REC LEVEL ADJ (R)
D1401,1501 1S1555
DOLBY ON: -0.2V
DOLBY ON: -0.1V
Q1409 2SA733 SWITCH
Q1408 2SC945 RELAY DRIVE
D1402 10E-2
S1303-1 DOLBY NR
D1409,1410 1S1555
BU1401 OSC UNIT
BIAS ADJ
D1410 2SD774 BIAS SWITCH
Q1411 2SA733 SWITCH
Q1412 2SC945 SWITCH
D1403~1405 1S1555
TYPE I : 11.3V AC
TYPE II : 15V AC
TYPE IV : 19V AC
TYPE I : 29V AC
TYPE II : 40V AC
TYPE IV : 50V AC
GND(1)
GND(2)
(-12V)
(+12V)
S1303-2 METAL AUTO
CN1301
CN1306
D1406~1408 SLH-54PC3
[LED(C) BOARD]
[SWITCH(B) BOARD]
S1350 TYPE IV (METAL)
TYPE I/II (NORM/CrO2)
S1351 TYPE II/IV (CrO2/METAL) TYPE I (NORM)
S1353 ERASE PROOF
S1352 HALF DET HALF(IN) HALF(OUT)
S1354 EJECT OPEN CLOSE
[KEY BOARD (B
D1311 PR5534S
FWD PAUSE
S1302


O
P
Q
R
S
T
U
V
W
X
Y
Z
A1
B1
C1
D1
E1
TO TC(A) SYSTEM CONTROL BOARD
CNP1008(1~3)
CNP1008(4~10)
DOLBY
REC IND
PLAY IND
PB (L)
PB (R)
REC (L)
REC (R)
CNP819(5~7) TO FUNCTION BOARD
CNP819(1~4) TO FUNCTION BOARD
Q1301, 1303 2SA1048 SYSTEM CONTROL
Q1302 2SC945 SYSTEM CONTROL
Q1304, 1305 2SC945 MOTOR DRIVE
IC1301 TC9310N-001 SYSTEM CONTROL
D1302, 1303 1S1555
REV LAMP
REC LAMP
PAUSE LAMP
FWD LAMP
REC MUTE
REC
PAUSE
FF
STOP
FWD
REW
BIAS
TIMER
MODE
GND
COUNTER
AMS IN
VDD
LINE MUTING
FWD MOTOR
REW MOTOR
RESET
SHUT-OFF
OSC
PM2
PM1
IC1301
HALF DETCTIN: 4.6V
1.1mSec
1.3Vp-p
D1301 1S1555
D1305 1S1555
Q1306 2SA1048 DRIVER
CN1304
MOTOR
(MOMENTARILY 0.4V)
(MOMENTARILY 6.6V)
(MOMENTARILY 0.2V)
FWD:
CNP816 TO FUNCTION BOARD
GND(1)
+12V
+5V
RESET
GND(2)
-12V
GND(2)
GND(1)
-11.5V
11.5V
CN1301
CN1306
CN1305
CNJ1303
D1308~1310 1S1555
D1306, 1307 10E-2
PM201 PLUNGER SOLENOID FWD
PM202 PLUNGER SOLENOID FF/PAUSE
S1354 EJECT OPEN CLOSE
D1313 FWD
D1312 PAUSE
D1311 REC
S1304 REW
S1305 FWD
S1306 STOP
S1307 FF
S1308 PAUSE
S1309 REC
S1310 REC-MUTE
[KEY BOARD (B) BOARD]
D1311 PR5534S
D1312 SLH-54
D1313 SLH-54PC3
S1301 TIMER
PLAY
OFF
REC
[TIMER BOARD]
D1304 SHUT-OFF DET
SP1201
R1322 330 (1/6W)
R1323 10k (1/6W)
[PHOTO COUPLER BOARD]

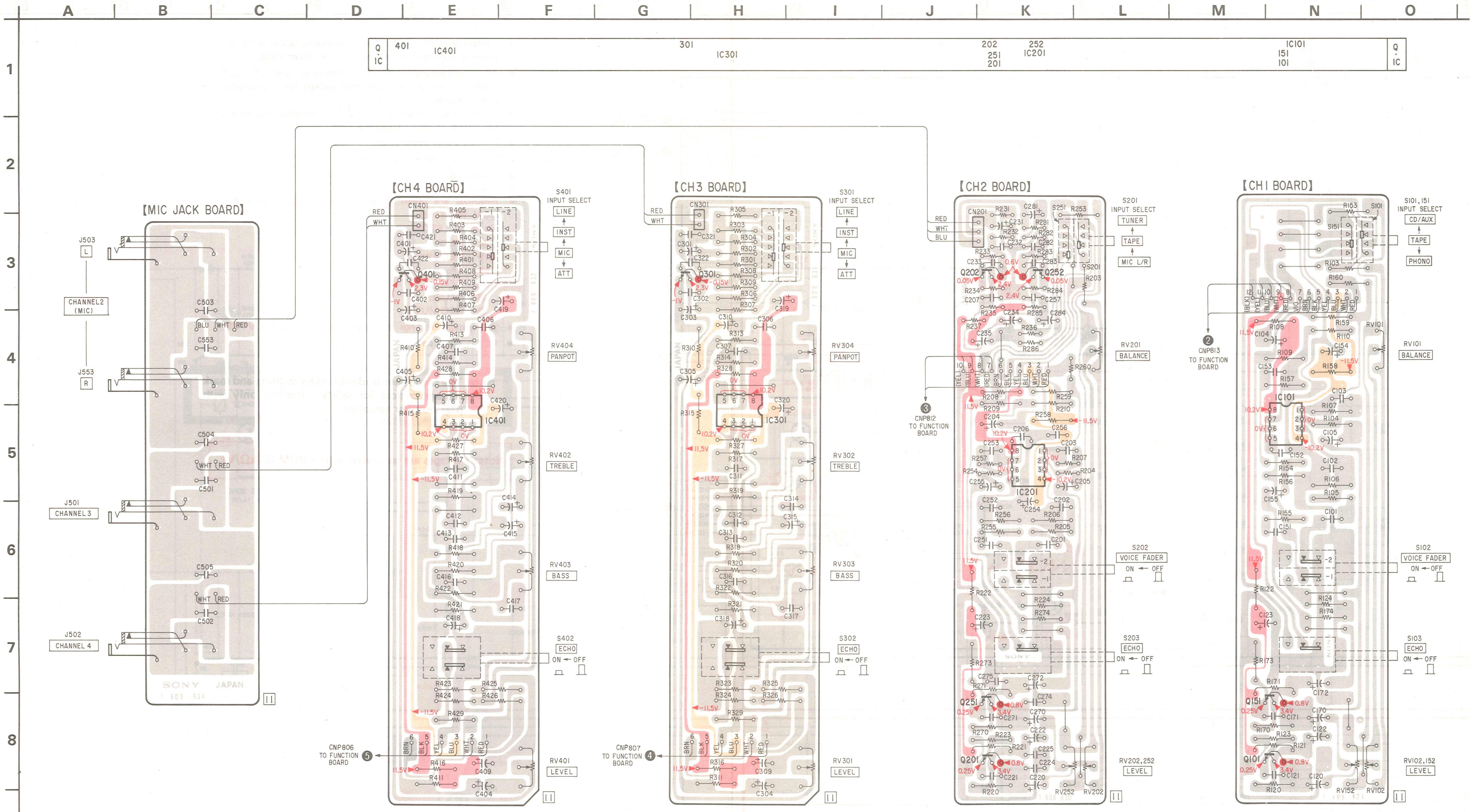
- Components for right channel have same values as for left channel. Reference numbers are coded from 1500.
- All capacitors are in μF unless otherwise noted. pF : $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, $\frac{1}{4}$W, $\frac{1}{6}$W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- ▭ : panel designation.
- ▭ : adjustment for repair.
- ——— : B+ bus.
- – – – : B- bus.
- Readings are taken under no-signal conditions with a VOM (50kΩ/V).
  No mark : STOP
  ▶ : FWD
  ●/▶ : REC FWD
  ▶▶ : FF
  ◀◀ : REW
  ❚❚ : PAUSE
  ○ : REC MUTE
- AC voltage readings in the bias oscillator with a VTVM.
- ⇨ : signal path

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Voltages are measured with a VOM (50kΩ/V).

4-7. MOUNTING DIAGRAM

— Mixing section —


A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
1
2
3
4
5
6
7
8
Q·IC
401
IC401
301
IC301
202
251
201
252
IC201
IC101
151
101
[MIC JACK BOARD]
J503
L
CHANNEL2 (MIC)
J553
R
J501
CHANNEL 3
J502
CHANNEL 4
C503
C553
C504
C501
C505
C502
BLU
WHT
RED
SONY JAPAN
[CH4 BOARD]
CN401
Q401
IC401
S401
INPUT SELECT
LINE
INST
MIC
ATT
RV404
PANPOT
RV402
TREBLE
RV403
BASS
S402
ECHO
ON ← OFF
RV401
LEVEL
CNP806
TO FUNCTION BOARD
⑤
[CH3 BOARD]
CN301
Q301
IC301
S301
INPUT SELECT
LINE
INST
MIC
ATT
RV304
PANPOT
RV302
TREBLE
RV303
BASS
S302
ECHO
ON ← OFF
RV301
LEVEL
CNP807
TO FUNCTION BOARD
④
[CH2 BOARD]
CN201
Q202
Q252
IC201
Q251
Q201
S201
INPUT SELECT
TUNER
TAPE
MIC L/R
RV201
BALANCE
S202
VOICE FADER
ON ← OFF
S203
ECHO
ON ← OFF
RV202,252
LEVEL
RV252
RV202
CNP812
TO FUNCTION BOARD
③
[CH1 BOARD]
IC101
Q151
Q101
S101,151
INPUT SELECT
CD/AUX
TAPE
PHONO
RV101
BALANCE
S102
VOICE FADER
ON ← OFF
S103
ECHO
ON ← OFF
RV102,152
LEVEL
RV152
RV102
CNP813
TO FUNCTION BOARD
②
11.5V
−11.5V
10.2V
0V
0.15V
2.3V
0.6V
2.4V
0.05V
0.8V
3.4V
0.25V

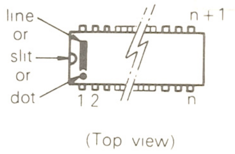
● ○— : parts extracted from the component side.

● ▨ : B + pattern

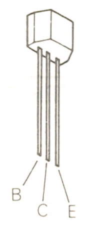
● ▨ : B − pattern

Semiconductor Lead Layouts

µPC4558C

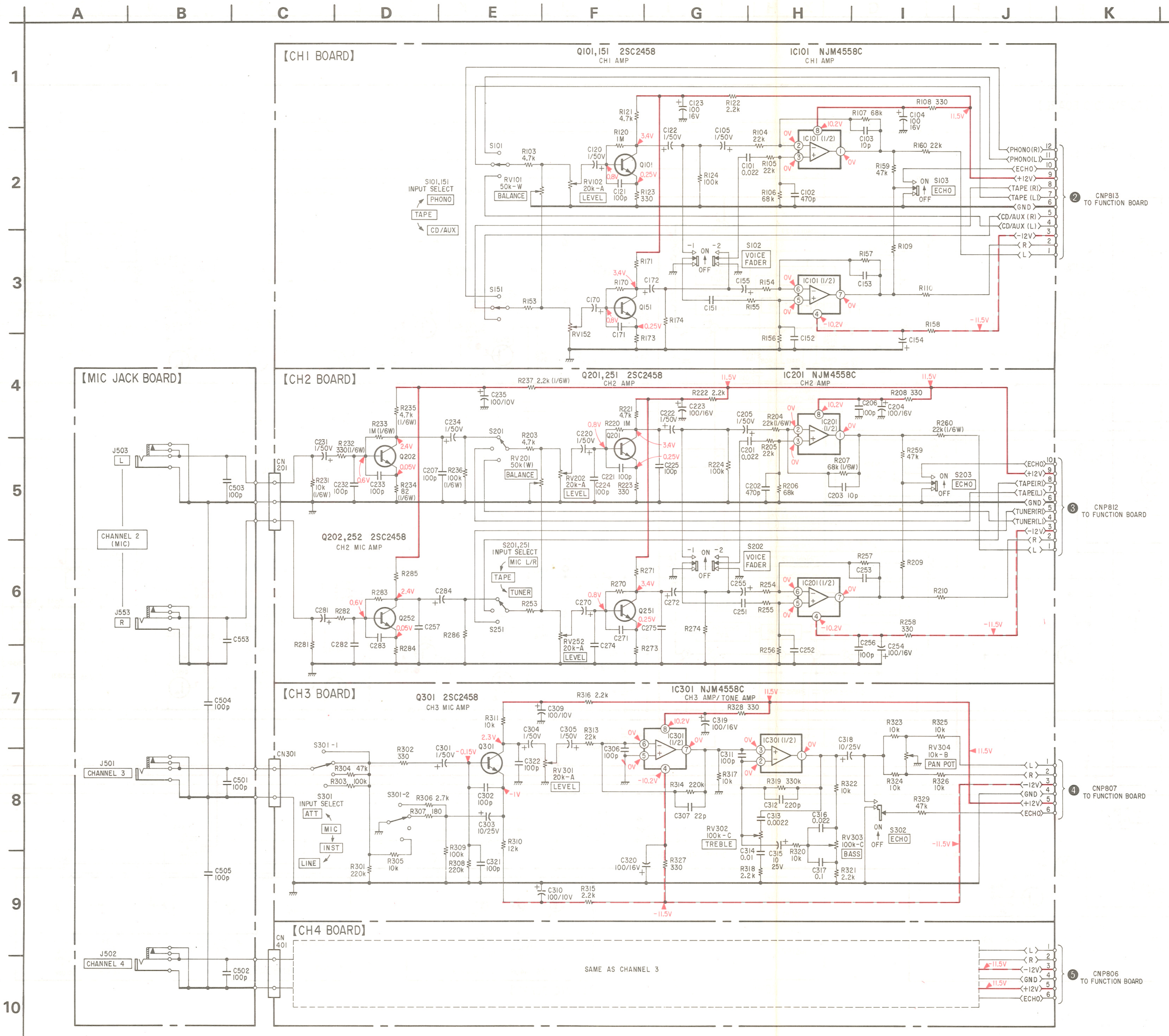

line
or
slit
or
dot
n+1
1 2
n
(Top view)

2SC2458L-BL



4-8. SCHEMATIC DIAGRAM

— Mixing section —

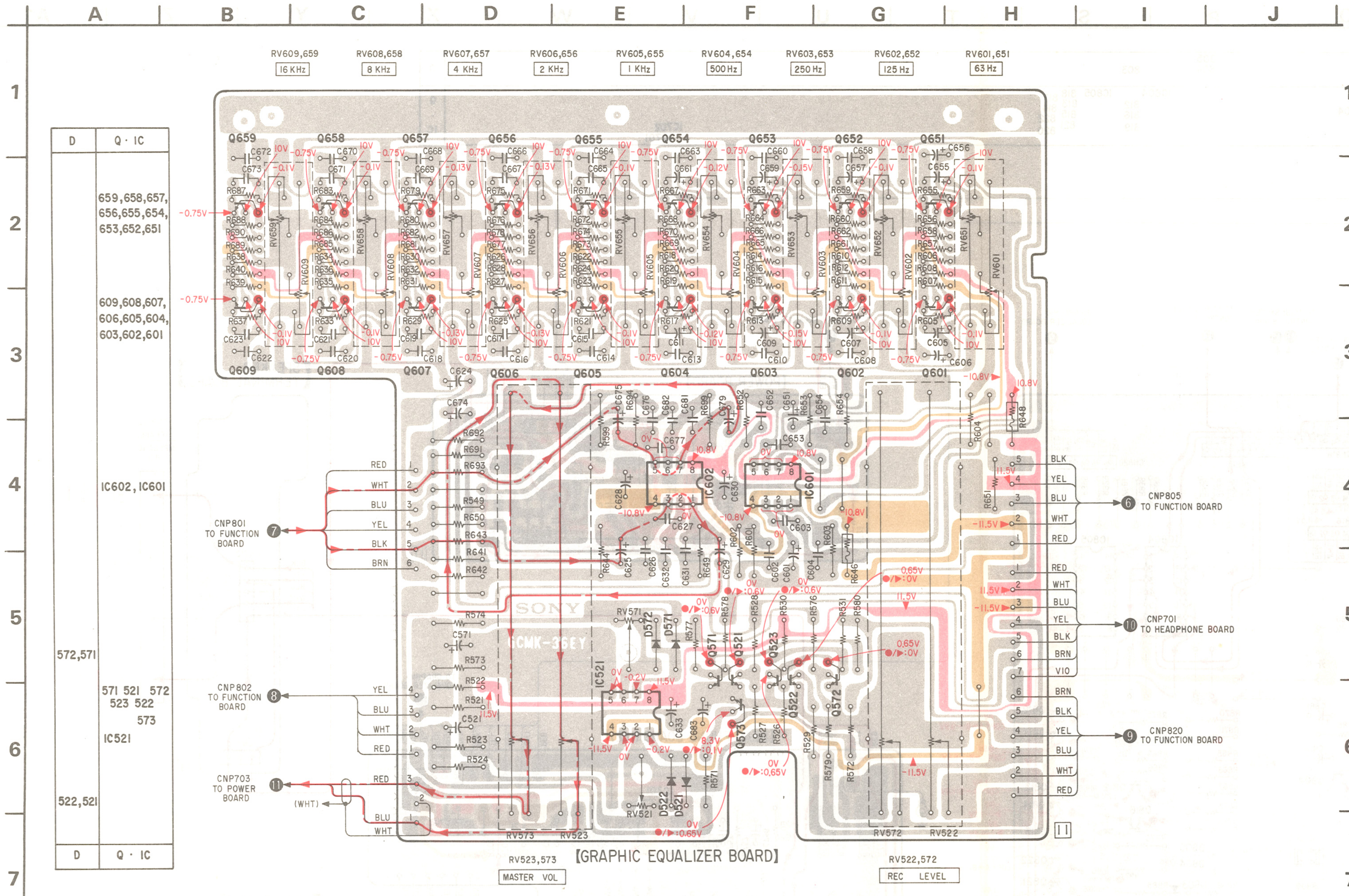

A B C D E F G H I J K L M N O
1 2 3 4 5 6 7 8 9 10
[CH1 BOARD]
Q101,151 2SC2458
CH1 AMP
IC101 NJM4558C
CH1 AMP
S101,151
INPUT SELECT
PHONO
TAPE
CD/AUX
RV101
50k-W
BALANCE
RV102
20k-A
LEVEL
S102
VOICE FADER
S103
ECHO
ON
OFF
CNP813
TO FUNCTION BOARD
PHONO(R)
PHONO(L)
ECHO
+12V
TAPE (R)
TAPE (L)
GND
CD/AUX (R)
CD/AUX (L)
-12V
R
L
[MIC JACK BOARD]
J503
L
J553
R
CHANNEL 2 (MIC)
[CH2 BOARD]
Q201,251 2SC2458
CH2 AMP
IC201 NJM4558C
CH2 AMP
Q202,252 2SC2458
CH2 MIC AMP
S201,251
INPUT SELECT
MIC L/R
TAPE
TUNER
RV201
50k(W)
BALANCE
RV202
20k-A
LEVEL
RV252
20k-A
LEVEL
S202
VOICE FADER
S203
ECHO
CNP812
TO FUNCTION BOARD
TAPE(R)
TAPE(L)
TUNER(R)
TUNER(L)
[CH3 BOARD]
Q301 2SC2458
CH3 MIC AMP
IC301 NJM4558C
CH3 AMP/TONE AMP
J501
CHANNEL 3
CN301
S301
INPUT SELECT
ATT
MIC
INST
LINE
RV301
20k-A
LEVEL
RV302
100k-C
TREBLE
RV303
100k-C
BASS
RV304
10k-B
PAN POT
S302
ECHO
CNP807
TO FUNCTION BOARD
[CH4 BOARD]
J502
CHANNEL 4
CN401
SAME AS CHANNEL 3
CNP806
TO FUNCTION BOARD
11.5V
-11.5V
10.2V
-10.2V
3.4V
0.8V
0.25V
2.4V
0.6V
0.05V
0V

- Components for right channel have same values as for left channel. Reference numbers are coded from 100, 200.
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼ W, ⅙ W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- ▭ : panel designation.
- ——— : B+ bus.
- – – – : B− bus.
- Readings are taken under no-signal conditions with a VOM (50kΩ/V).

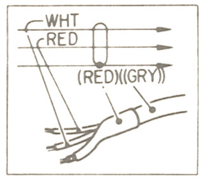
Note: Voltages are measured with a VOM (50kΩ/V).

4-9. MOUNTING DIAGRAM

— Graphic equalizer section —


RV609,659 16 KHz
RV608,658 8 KHz
RV607,657 4 KHz
RV606,656 2 KHz
RV605,655 1 KHz
RV604,654 500 Hz
RV603,653 250 Hz
RV602,652 125 Hz
RV601,651 63 Hz
D
Q · IC
659,658,657, 656,655,654, 653,652,651
609,608,607, 606,605,604, 603,602,601
IC602, IC601
572,571
571 521 572 523 522 573
IC521
522,521
CNP801 TO FUNCTION BOARD
CNP802 TO FUNCTION BOARD
CNP703 TO POWER BOARD
CNP805 TO FUNCTION BOARD
CNP701 TO HEADPHONE BOARD
CNP820 TO FUNCTION BOARD
RV523,573 MASTER VOL
[GRAPHIC EQUALIZER BOARD]
RV522,572 REC LEVEL
SONY
1-CMK-366-11

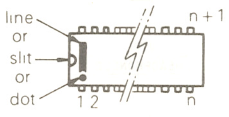
- Color code of sleeving over the end of the jacket.


WHT
RED
(RED)(GRY)

- ○— : parts extracted from the component side.
- ▨ : B + pattern
- ▨ : B − pattern
- ▬▬➔▬ : signal path
- ▬▬▬➔ : L-CH signal path
- ▬·▬·➔ : R-CH signal path

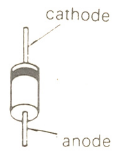
Semiconductor Lead Layouts

μPC4558C

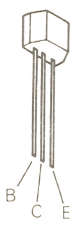

line
or
slit
or
dot
n+1
1 2
n

(Top view)

1S1555

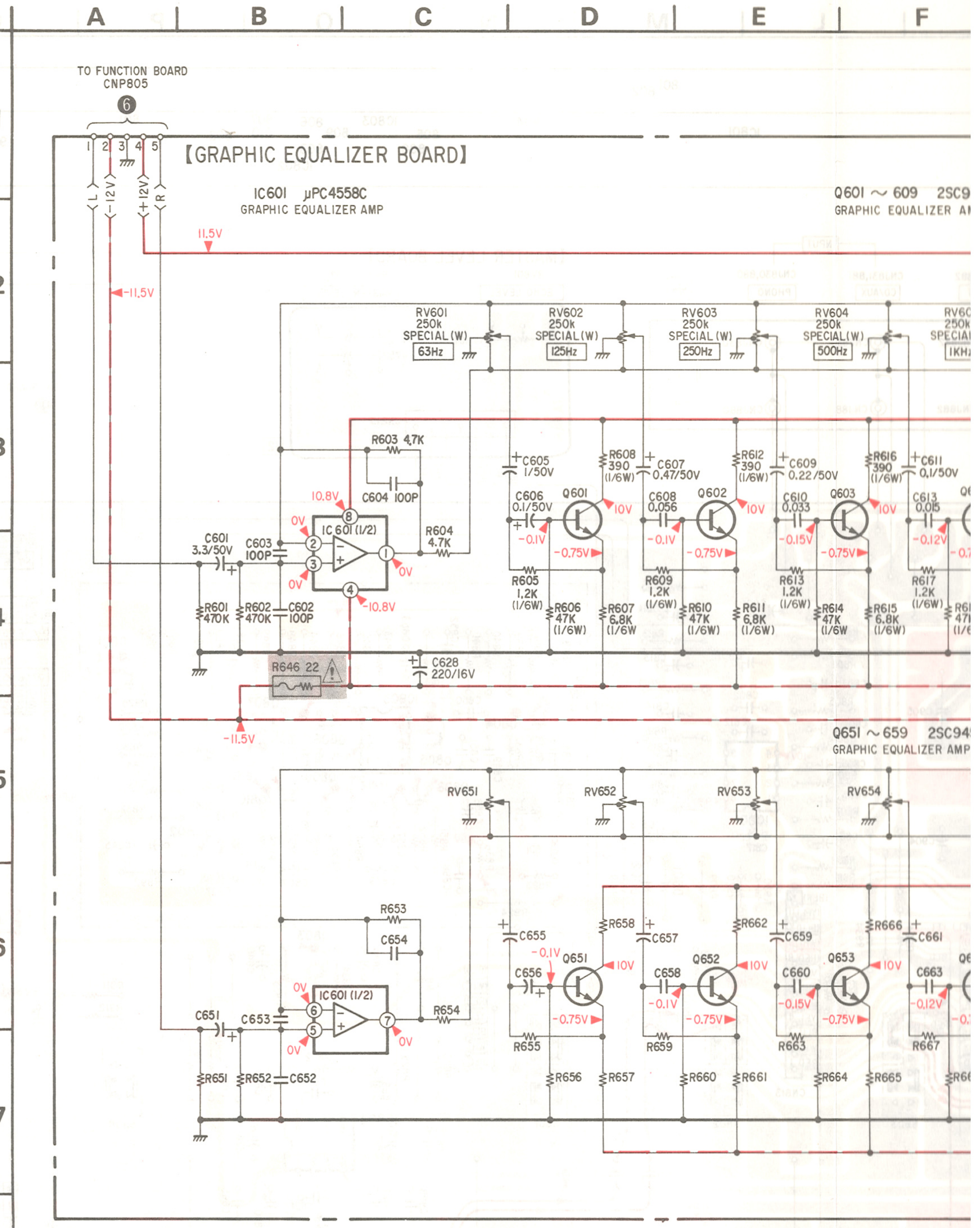

cathode
anode

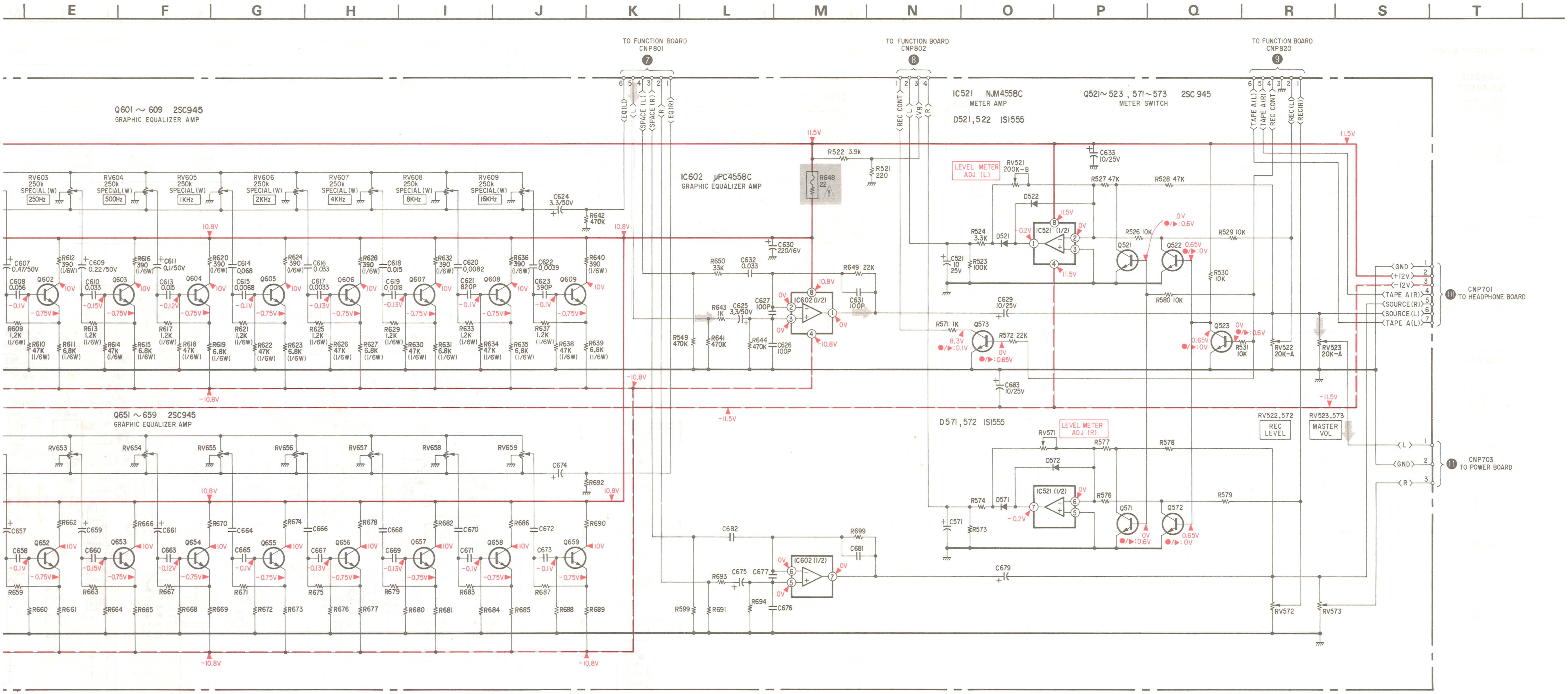
2SC2458



4-10. SCHEMATIC DIAGRAM

— Graphic equalizer section —


TO FUNCTION BOARD CNP805
[GRAPHIC EQUALIZER BOARD]
IC601 μPC4558C GRAPHIC EQUALIZER AMP
Q601 ~ 609 2SC9
GRAPHIC EQUALIZER AMP
Q651 ~ 659 2SC94
GRAPHIC EQUALIZER AMP
RV601 250k SPECIAL(W) 63Hz
RV602 250k SPECIAL(W) 125Hz
RV603 250k SPECIAL(W) 250Hz
RV604 250k SPECIAL(W) 500Hz
RV651
RV652
RV653
RV654
-11.5V
11.5V
-10.8V
10.8V
IC601 (1/2)
R646 22
C628 220/16V


E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
TO FUNCTION BOARD CNP801 ⑦
TO FUNCTION BOARD CNP802 ⑧
TO FUNCTION BOARD CNP820 ⑨
Q601 ～ 609 2SC945 GRAPHIC EQUALIZER AMP
Q651 ～ 659 2SC945 GRAPHIC EQUALIZER AMP
IC602 μPC4558C GRAPHIC EQUALIZER AMP
IC521 NJM4558C METER AMP
D521,522 1S1555
Q521～523, 571～573 2SC945 METER SWITCH
D571,572 1S1555
RV603 250k SPECIAL(W) 250Hz
RV604 250k SPECIAL(W) 500Hz
RV605 250k SPECIAL(W) 1KHz
RV606 250k SPECIAL(W) 2KHz
RV607 250k SPECIAL(W) 4KHz
RV608 250k SPECIAL(W) 8KHz
RV609 250k SPECIAL(W) 16KHz
R648 22
LEVEL METER ADJ (L)
LEVEL METER ADJ (R)
RV522,572 REC LEVEL
RV523,573 MASTER VOL
CNP701 TO HEADPHONE BOARD ⑩
CNP703 TO POWER BOARD ⑪
11.5V
10.8V
-10.8V
-11.5V

- Components for right channel have same values as for left channel. Reference numbers are coded from 600.
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4 W, 1/6 W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- : fusible resistor.
- ▭ : panel designation.
- ▭ : adjustment for repair.
- ——: B+ bus.
- - - -: B- bus.
- Reading are taken under no-signal conditions with a VOM (50kΩ/V).
  ●/▶ : REC FWD
- ⇨ : signal path

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

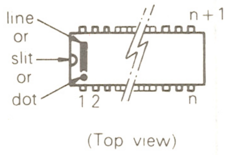
Note: Voltages are measured with a VOM (50kΩ/V).

4-11. MOUNTING DIAGRAM

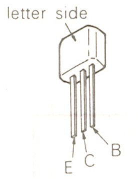
– Function section –

Semiconductor Lead Layouts

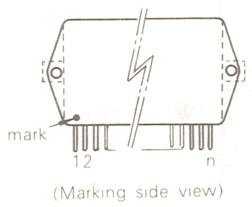
TL082CP
NJM4558D-D
CX-7932
LC4066BH
μPC4557C


line
or
slit
or
dot
n+1
1 2
n
(Top view)

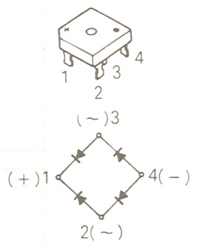
2SA1175


letter side
E C B

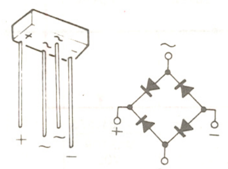
STK-4272


mark
12
n
(Marking side view)

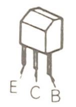
S2VB20



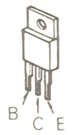
SIRBA10



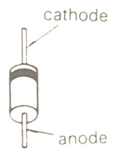
2SD774



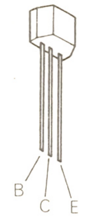
2SD1406

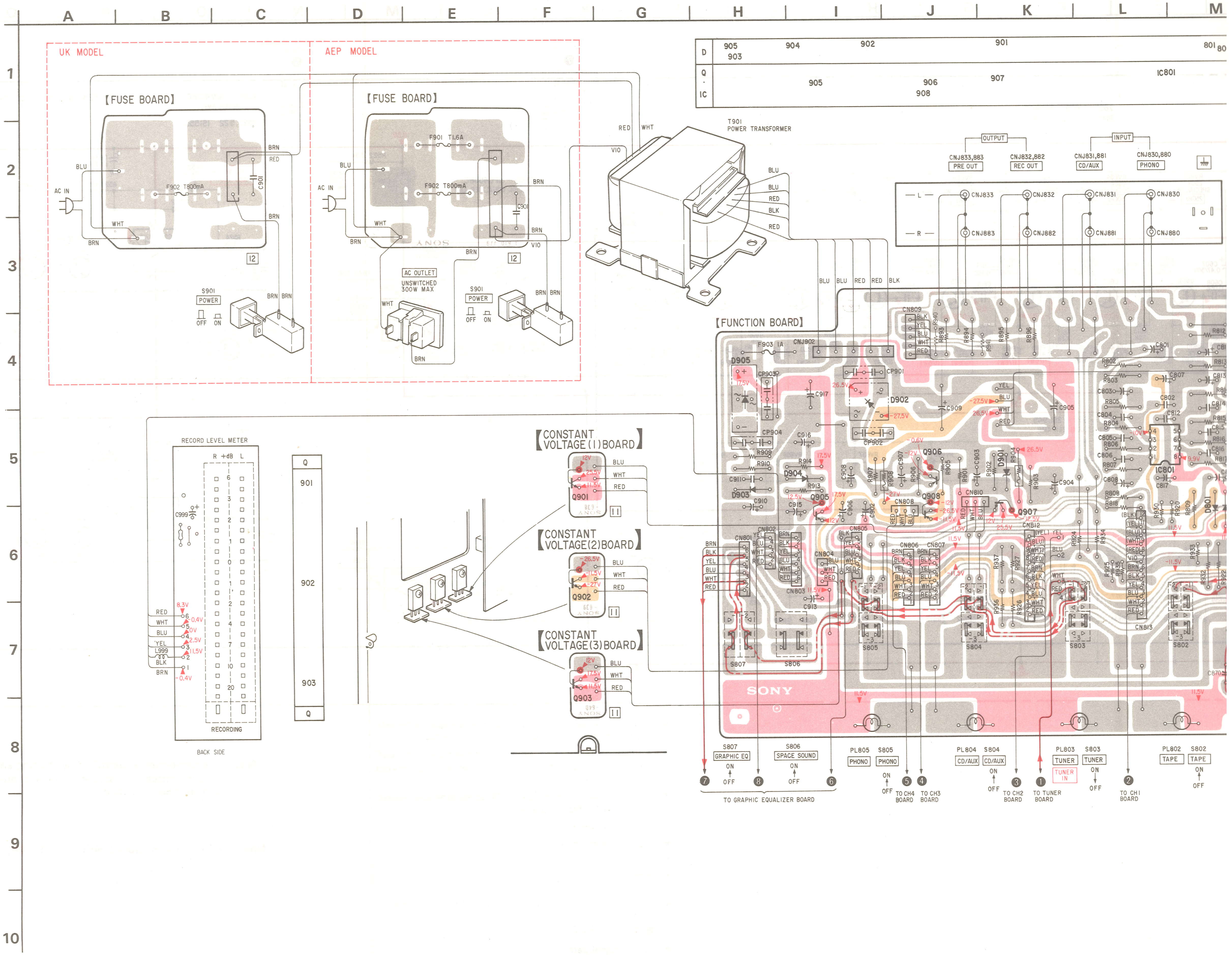


1S1555
10E-2
HZ12B1L


cathode
anode

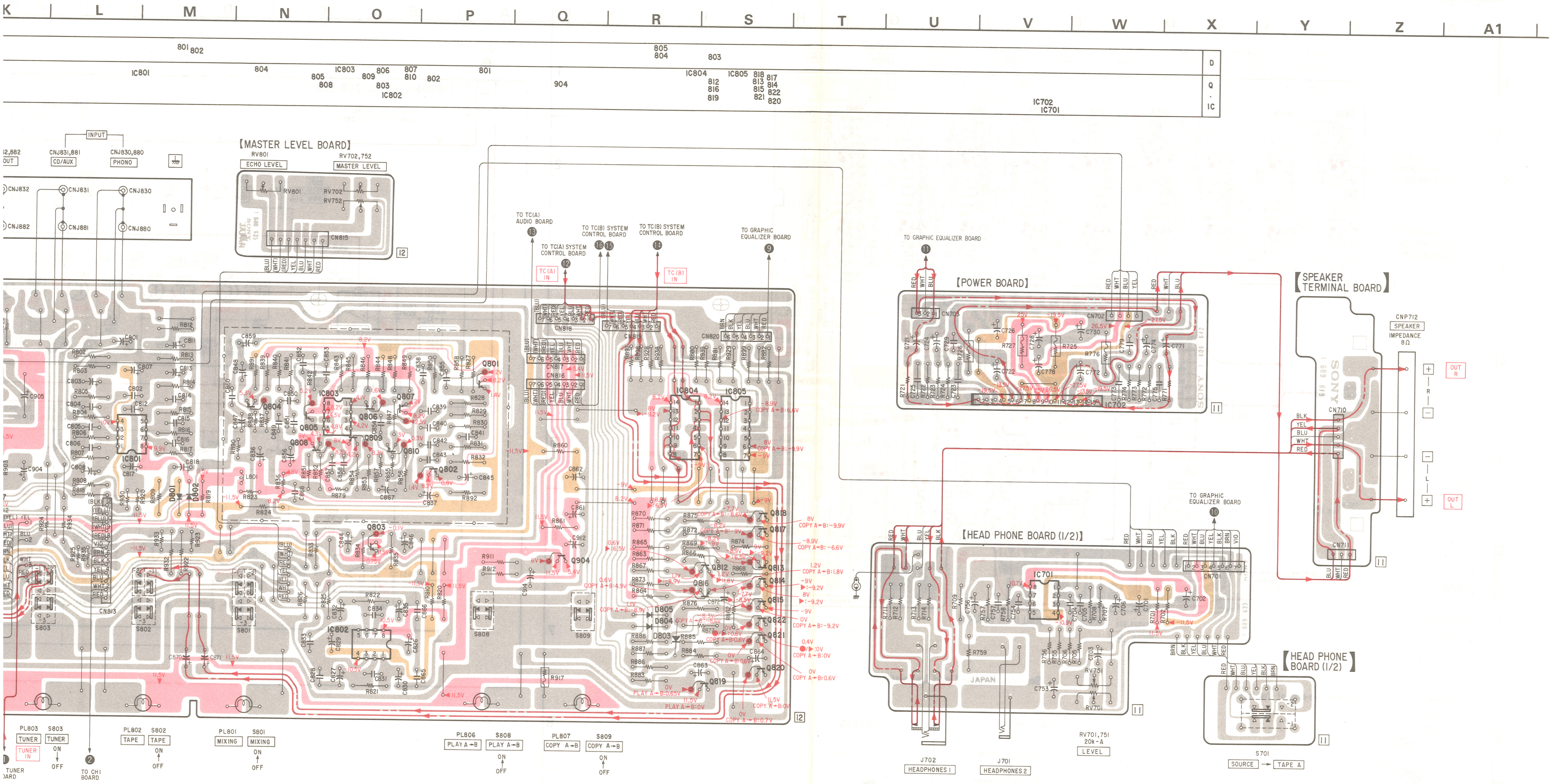
2SC2458




A
B
C
D
E
F
G
H
I
J
K
L
M
1
2
3
4
5
6
7
8
9
10
UK MODEL
AEP MODEL
【FUSE BOARD】
F902 T800mA
C901
AC IN
BLU
WHT
BRN
RED
12
S901
POWER
OFF ON
F901 T1.6A
AC OUTLET
UNSWITCHED
300W MAX
VIO
T901
POWER TRANSFORMER
OUTPUT
INPUT
CNJ833,883
PRE OUT
CNJ832,882
REC OUT
CNJ831,881
CD/AUX
CNJ830,880
PHONO
— L —
— R —
CNJ833
CNJ832
CNJ831
CNJ830
CNJ883
CNJ882
CNJ881
CNJ880
BLU BLU RED RED BLK
【FUNCTION BOARD】
F903 1A
CNJ902
CN809
D905
CP903
CP901
D902
IC801
Q906
Q907
Q908
Q905
D904
D903
D901
CN801
CN802
CN803
CN804
CN805
CN806
CN807
CN808
CN810
CN812
CN813
【CONSTANT VOLTAGE(1)BOARD】
Q901
【CONSTANT VOLTAGE(2)BOARD】
Q902
【CONSTANT VOLTAGE(3)BOARD】
Q903
RECORD LEVEL METER
R +dB L
RECORDING
BACK SIDE
C999
901
902
903
Q
SONY
S807
S806
S805
S804
S803
S802
S807
GRAPHIC EQ
ON
OFF
S806
SPACE SOUND
PL805
PHONO
PL804
CD/AUX
PL803
TUNER
TUNER IN
PL802
TAPE
⑦ ⑧ ⑥
TO GRAPHIC EQUALIZER BOARD
⑤ TO CH4 BOARD
④ TO CH3 BOARD
③ TO CH2 BOARD
① TO TUNER BOARD
② TO CH1 BOARD
11.5V
17.5V
26.5V
−27.5V
12V
−12V

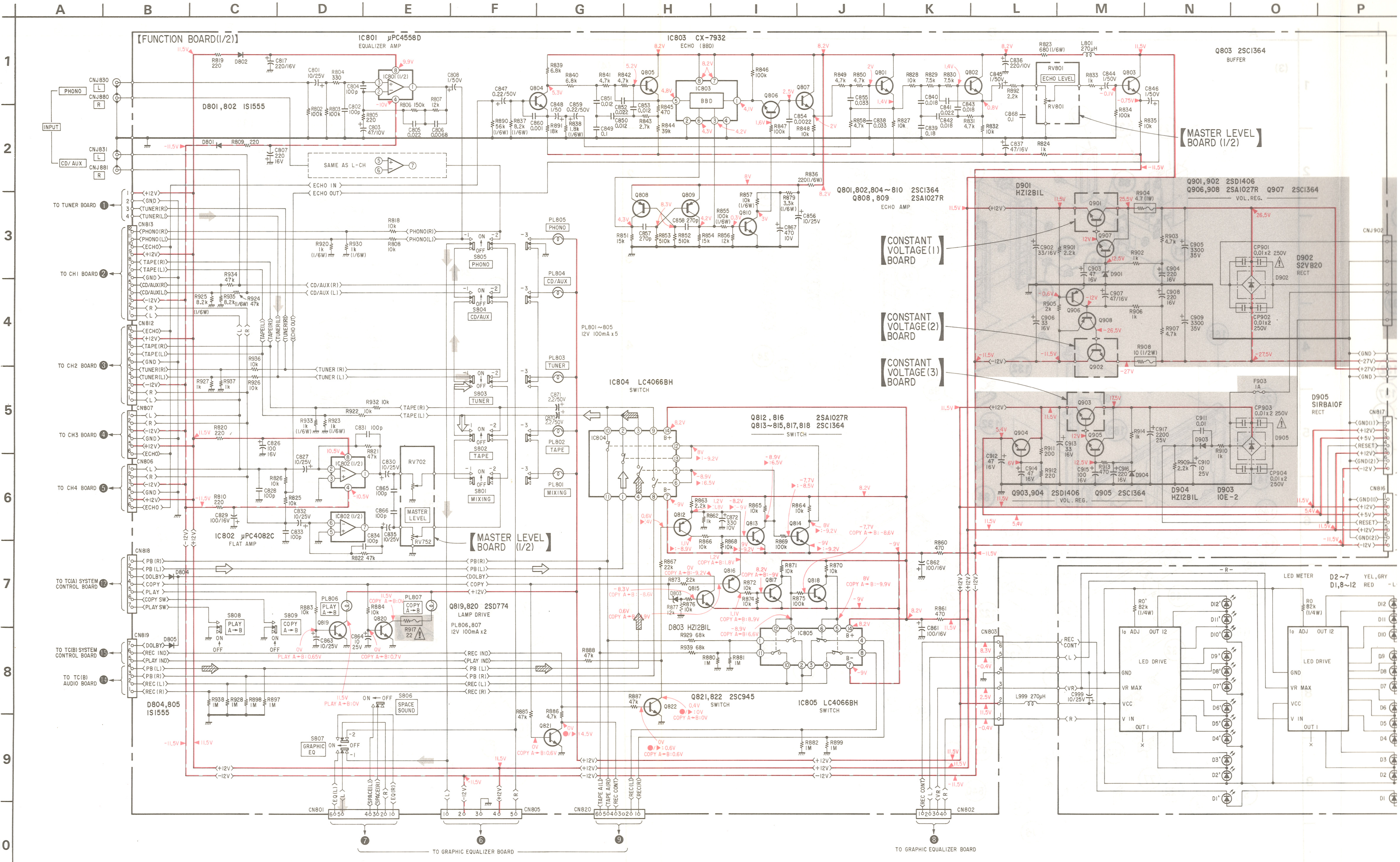
D	905 903	904	902	901	801 80
Q · IC		905	906 908	907	IC801

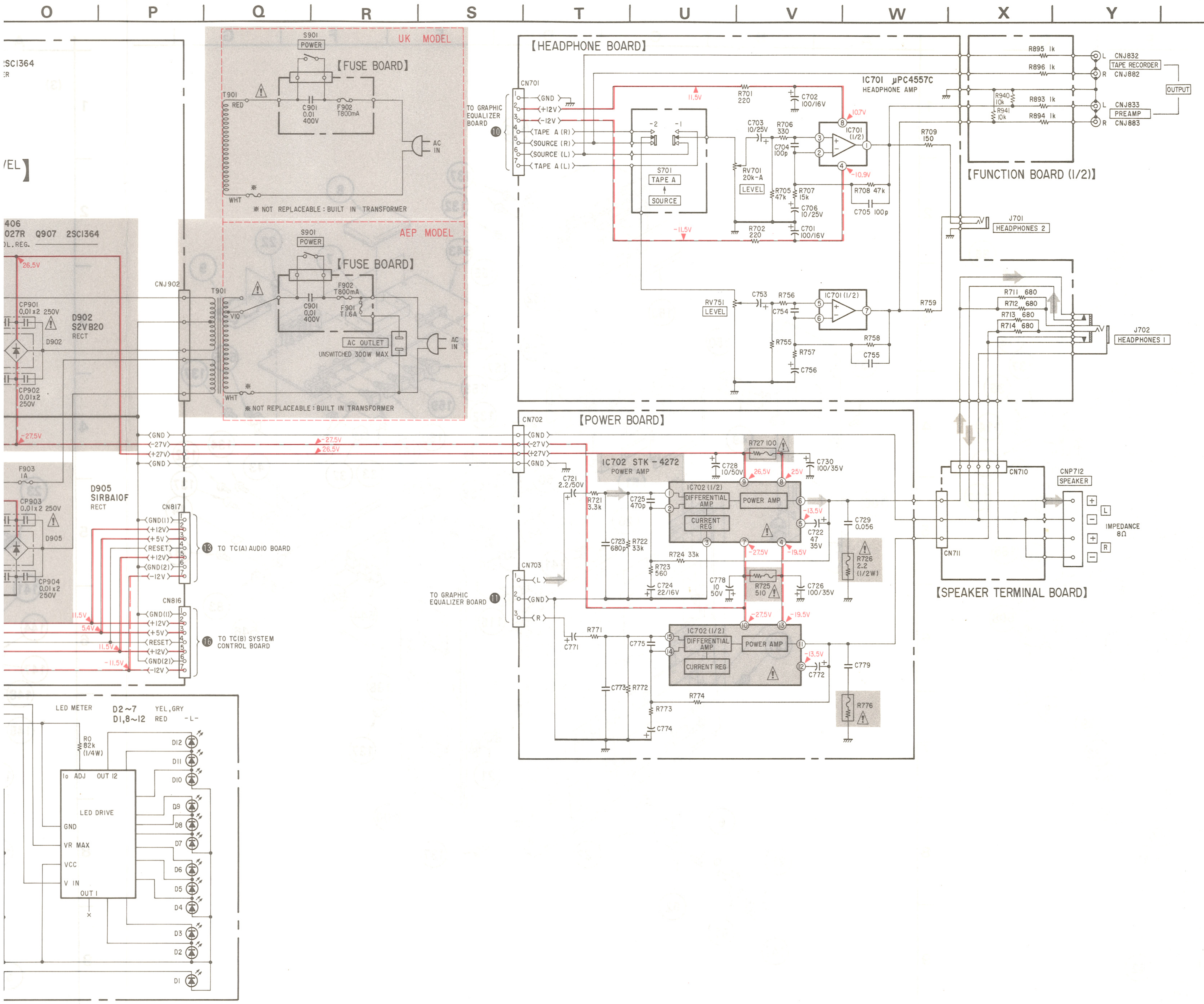
- ● ○— : parts extracted from the component side.
- ● ▨ : B + pattern
- ● ▨ : B − pattern
- ● ━━➡ : signal path
- ● ━━━➡ : L-CH signal path
- ● ━·━➡ : R-CH signal path


K
L
M
N
O
P
Q
R
S
T
U
V
W
X
Y
Z
A1
D
Q
IC
IC801
IC802
IC803
IC804
IC805
IC702
IC701
[MASTER LEVEL BOARD]
RV801
ECHO LEVEL
RV702,752
MASTER LEVEL
INPUT
CNJ831,881
CD/AUX
CNJ830,880
PHONO
TO TC(A) AUDIO BOARD
TO TC(A) SYSTEM CONTROL BOARD
TO TC(B) SYSTEM CONTROL BOARD
TO GRAPHIC EQUALIZER BOARD
TC(A) IN
TC(B) IN
[POWER BOARD]
[SPEAKER TERMINAL BOARD]
CNP712
SPEAKER
IMPEDANCE
8Ω
OUT R
OUT L
[HEAD PHONE BOARD (1/2)]
[HEAD PHONE BOARD (1/2)]
PL803
S803
TUNER
TUNER
TUNER IN
ON
OFF
TO CH1 BOARD
PL802
S802
TAPE
TAPE
PL801
S801
MIXING
MIXING
PL806
S808
PLAY A→B
PLAY A→B
PL807
S809
COPY A→B
COPY A→B
J702
HEADPHONES 1
J701
HEADPHONES 2
RV701,751
20k-A
LEVEL
S701
SOURCE
TAPE A
JAPAN
SONY

4-12. SCHEMATIC DIAGRAM

— Function section —


[FUNCTION BOARD(1/2)]
IC801 μPC4558D
EQUALIZER AMP
IC803 CX-7932
ECHO (BBD)
Q803 2SC1364
BUFFER
PHONO
CD/AUX
INPUT
CNJ830
CNJ880
CNJ831
CNJ881
D801, 802 IS1555
SAME AS L-CH
ECHO IN
ECHO OUT
TO TUNER BOARD ①
TO CH1 BOARD ②
TO CH2 BOARD ③
TO CH3 BOARD ④
TO CH4 BOARD ⑤
TO TC(A) SYSTEM CONTROL BOARD ⑫
TO TC(B) SYSTEM CONTROL BOARD ⑮
TO TC(B) AUDIO BOARD ⑭
[MASTER LEVEL BOARD (1/2)]
[CONSTANT VOLTAGE (1) BOARD]
[CONSTANT VOLTAGE (2) BOARD]
[CONSTANT VOLTAGE (3) BOARD]
Q801, 802, 804~810 2SC1364
Q808, 809 2SA1027R
ECHO AMP
D901 HZ12BIL
Q901, 902 2SD1406
Q906, 908 2SA1027R
Q907 2SC1364
VOL. REG.
D902 S2VB20 RECT
D905 SIRBA10F RECT
Q903, 904 2SD1406
VOL. REG.
Q905 2SC1364
D904 HZ12BIL
D903 10E-2
F903 1A
CNJ902
CN817
CN816
PL801~805
12V 100mA x 5
PL805 PHONO
PL804 CD/AUX
PL803 TUNER
PL802 TAPE
PL801 MIXING
S805 PHONO
S804 CD/AUX
S803 TUNER
S802 TAPE
S801 MIXING
IC804 LC4066BH
SWITCH
Q812, 816 2SA1027R
Q813~815, 817, 818 2SC1364
SWITCH
IC802 μPC4082C
FLAT AMP
RV702
MASTER LEVEL
RV752
Q819, 820 2SD774
LAMP DRIVE
PL806, 807
12V 100mA x 2
S808 PLAY A→B
S809 COPY A→B
PL806
PL807
S806 SPACE SOUND
S807 GRAPHIC EQ
D804, 805 IS1555
D803 HZ12BIL
IC805 LC4066BH
SWITCH
Q821, 822 2SC945
SWITCH
L999 270μH
LED METER
LED DRIVE
D2~7
D1, 8~12
CN801
CN805
CN820
CN802
CN803
⑦
⑥
⑨
⑧
TO GRAPHIC EQUALIZER BOARD
TO GRAPHIC EQUALIZER BOARD

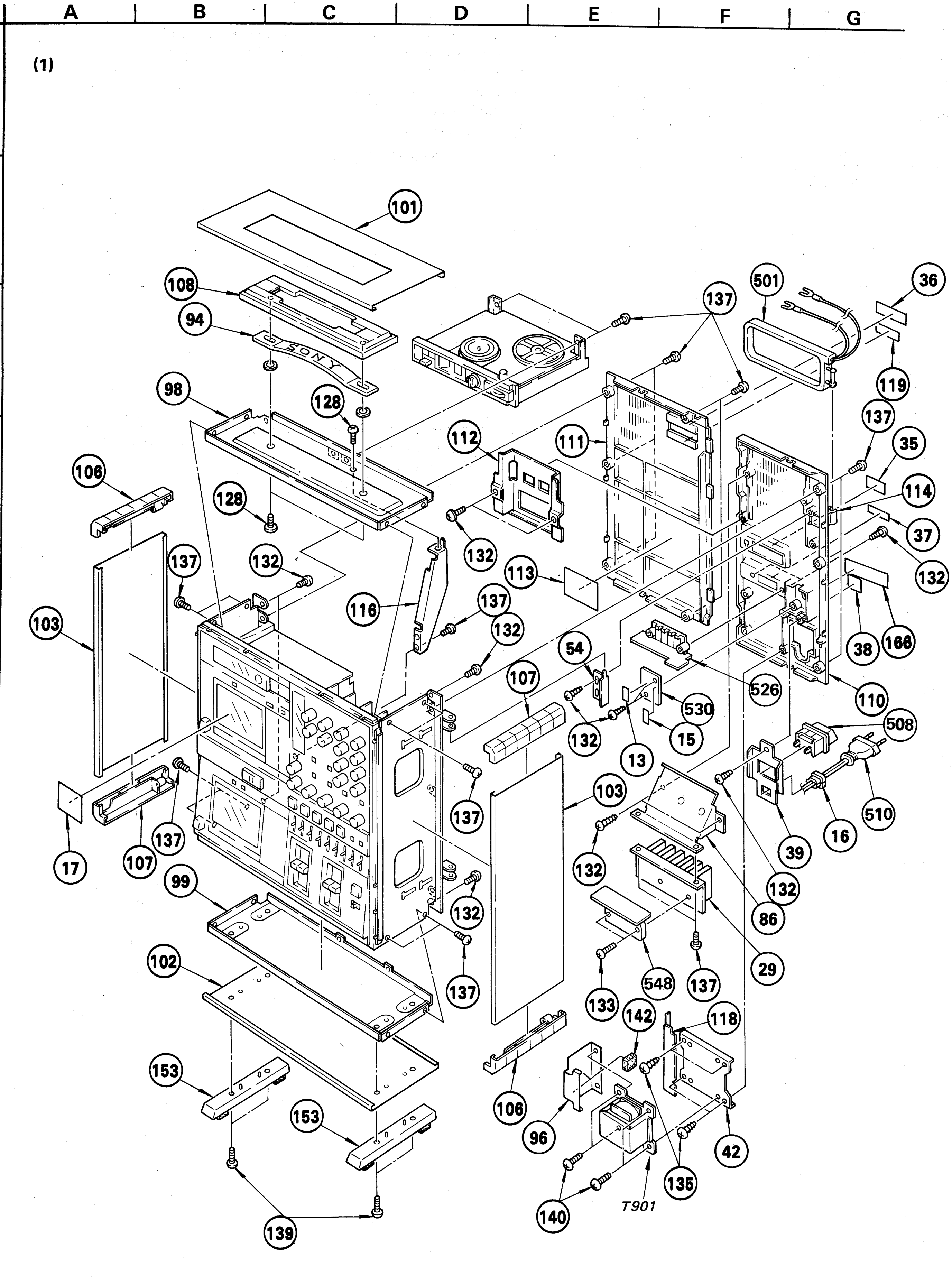

O P Q R S T U V W X Y Z A1 B1 C1 D1
[FUSE BOARD]
UK MODEL
AEP MODEL
S901 POWER
T901
C901 0.01 400V
F902 T800mA
F901 T1.6A
AC IN
AC OUTLET
UNSWITCHED 300W MAX
※ NOT REPLACEABLE : BUILT IN TRANSFORMER
D902 S2VB20 RECT
D905 SIRBA10F RECT
CP901 0.01x2 250V
CP902 0.01x2 250V
CP903 0.01x2 250V
CP904 0.01x2 250V
Q907 2SC1364
CNJ902
CN817
CN816
TO TC(A) AUDIO BOARD
TO TC(B) SYSTEM CONTROL BOARD
LED METER
D2~7 YEL,GRY
D1,8~12 RED
LED DRIVE
[HEADPHONE BOARD]
TO GRAPHIC EQUALIZER BOARD
CN701
IC701 μPC4557C HEADPHONE AMP
S701 TAPE A SOURCE
RV701 20k-A LEVEL
RV751 LEVEL
[FUNCTION BOARD (1/2)]
J701 HEADPHONES 2
J702 HEADPHONES 1
CNJ832 TAPE RECORDER
CNJ882
OUTPUT
CNJ833 PREAMP
CNJ883
[POWER BOARD]
CN702
CN703
IC702 STK-4272 POWER AMP
DIFFERENTIAL AMP
POWER AMP
CURRENT REG
[SPEAKER TERMINAL BOARD]
CN710
CN711
CNP712 SPEAKER
IMPEDANCE 8Ω

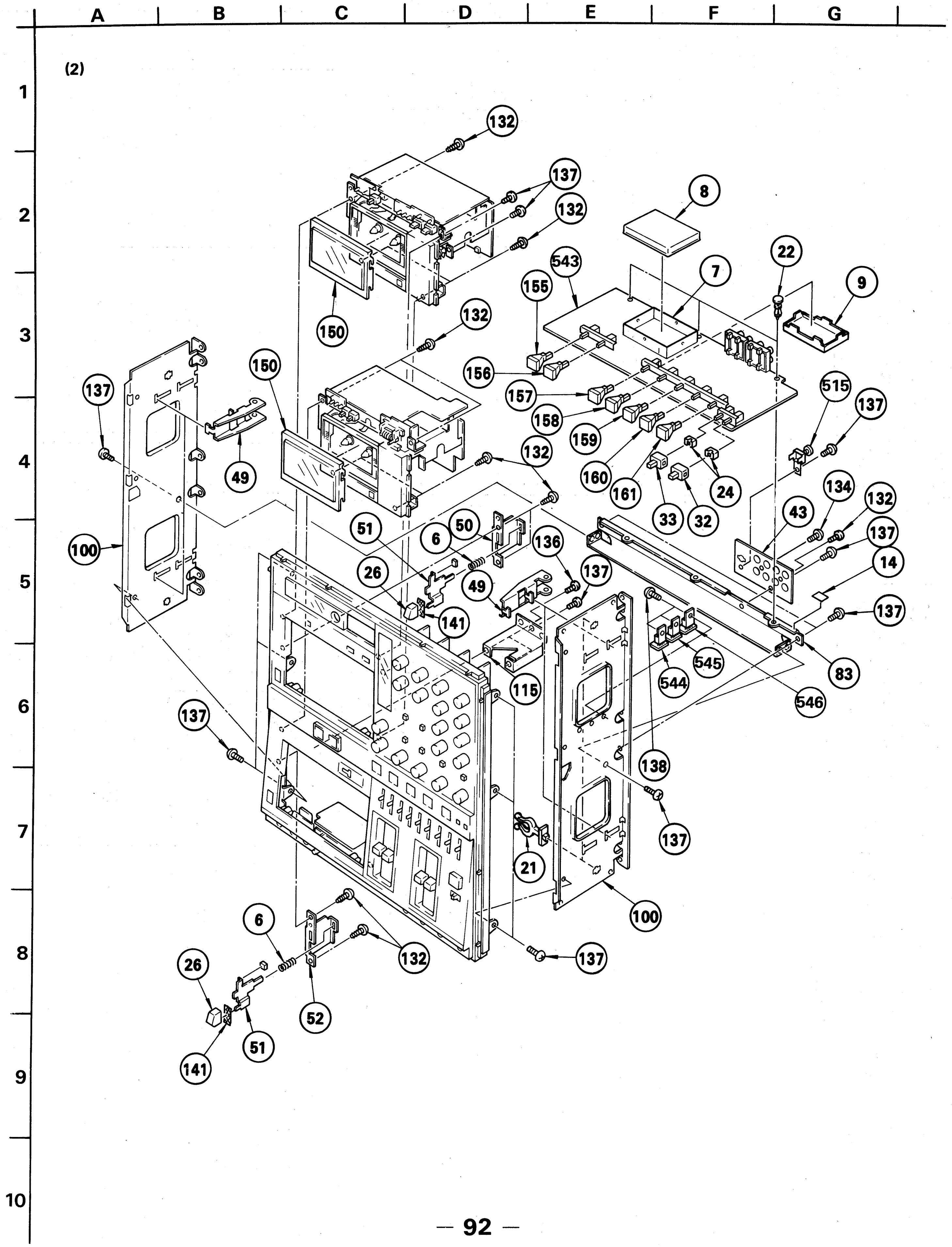
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼ W, ⅙ W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- ⏛ : fusible resistor.
- ▭ : panel designation.
- ——— : B+ bus.
- – – – : B– bus.
- Readings are taken under no-signal conditions with a VOM (50kΩ/V).
  No mark : STOP
  ▶ : FWD } DECK B
  ●/▶ : REC FWD
- ⇨ : FM signal path
- ⇨ : TC-A signal path
- ▨ : TC-B signal path

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Voltages are measured with a VOM (50kΩ/V).

SECTION 5
EXPLODED VIEWS AND PARTS LIST


(1)
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
101
108
94
137
501
36
98
128
119
137
35
112
111
106
128
114
37
132
132
137
132
116
113
137
166
38
132
103
54
107
526
530
110
508
132
15
13
103
137
510
17
107
137
39
16
99
132
132
86
132
29
102
137
548
137
133
142
118
153
106
96
153
42
135
139
140
T901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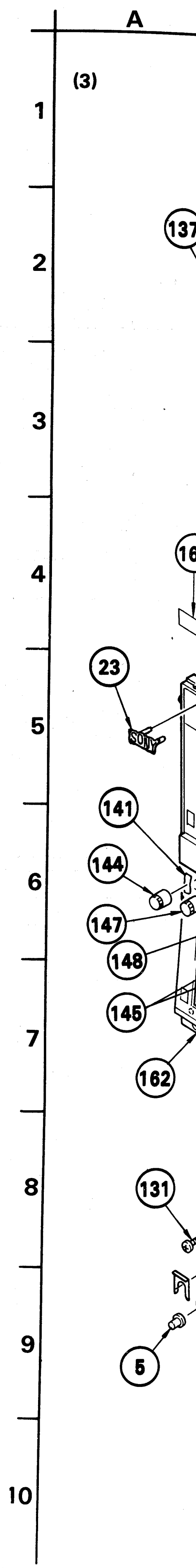
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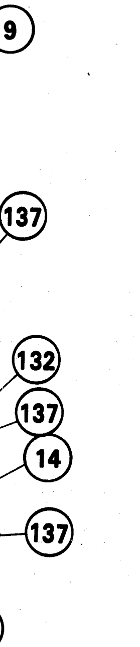

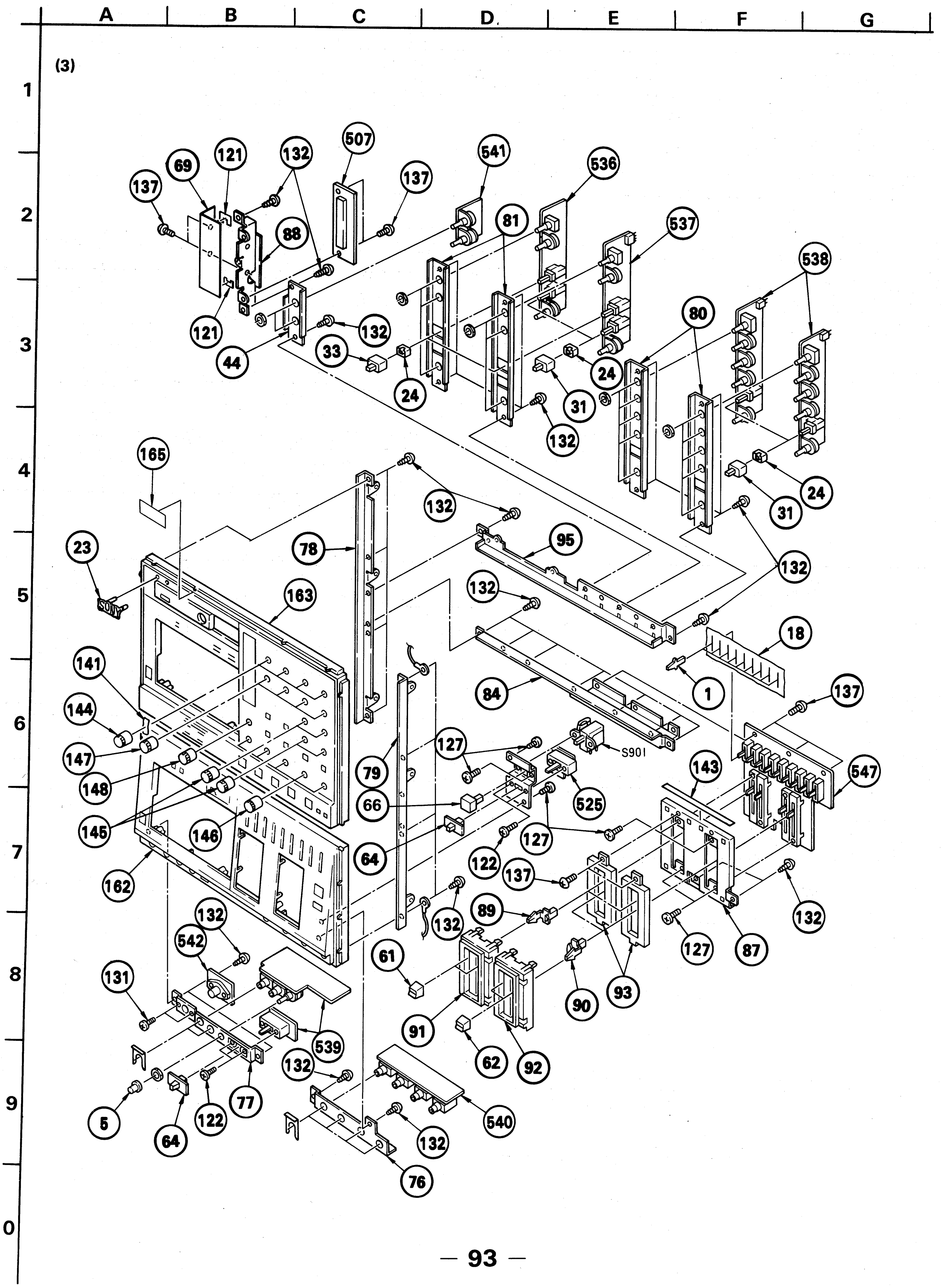
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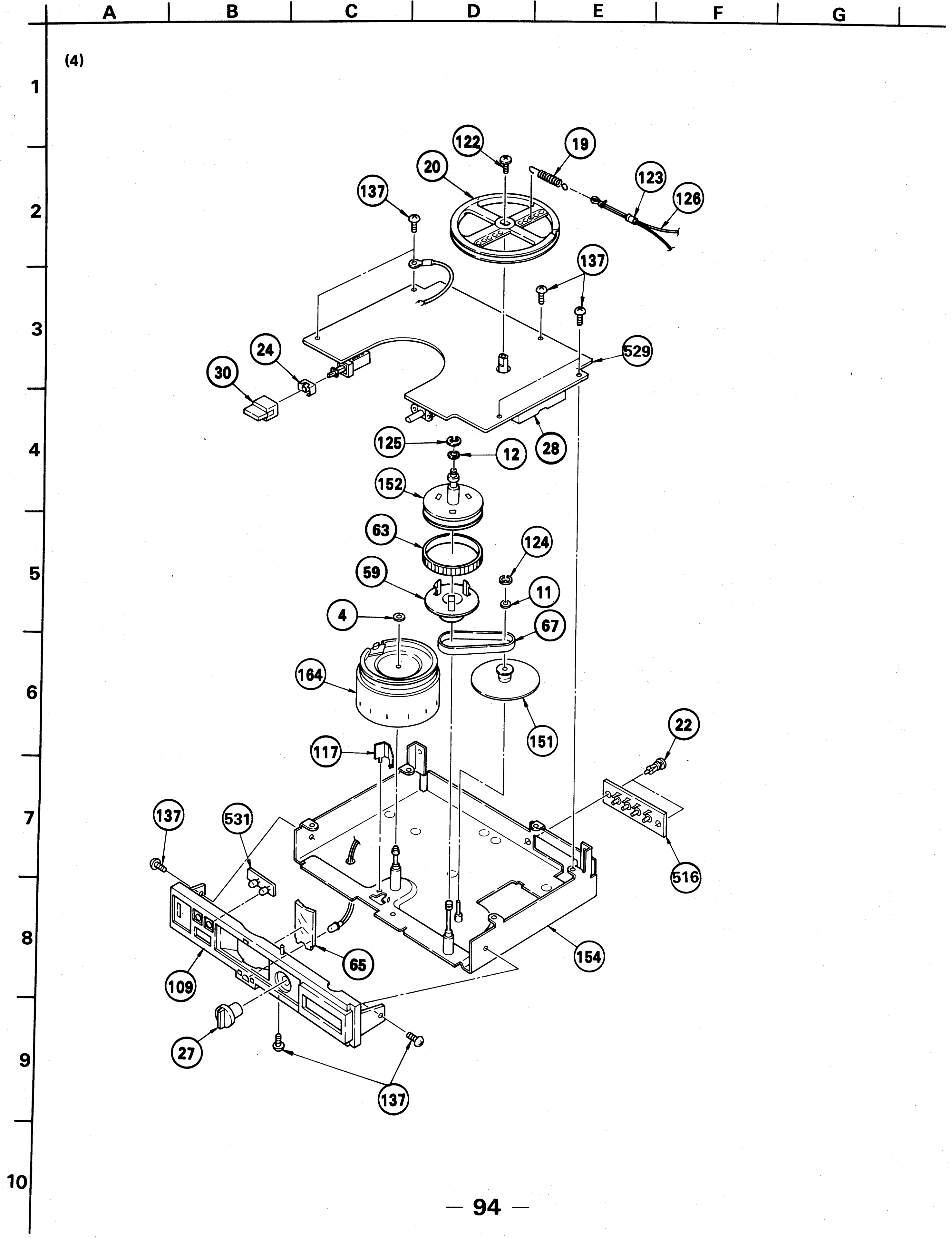
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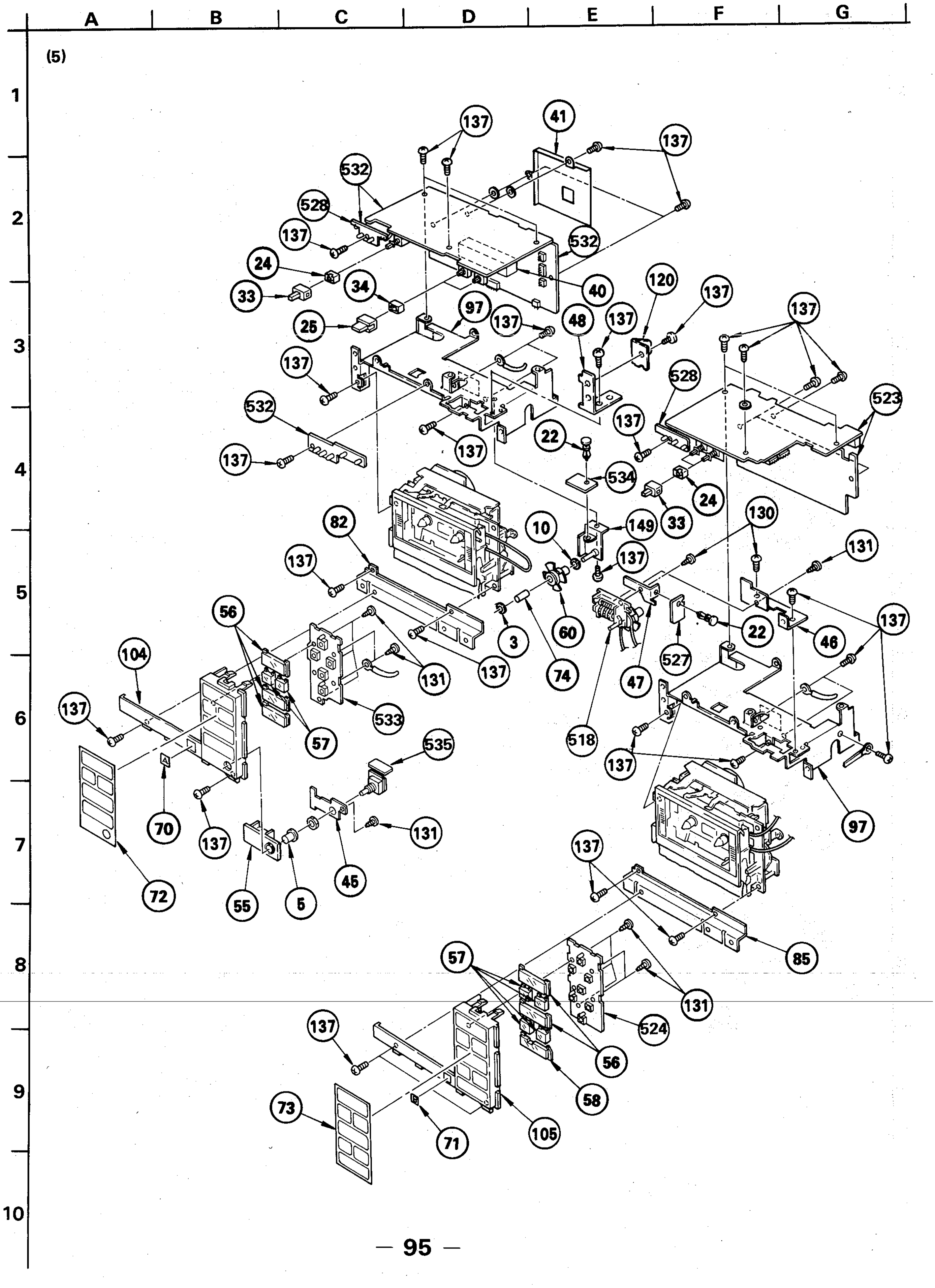
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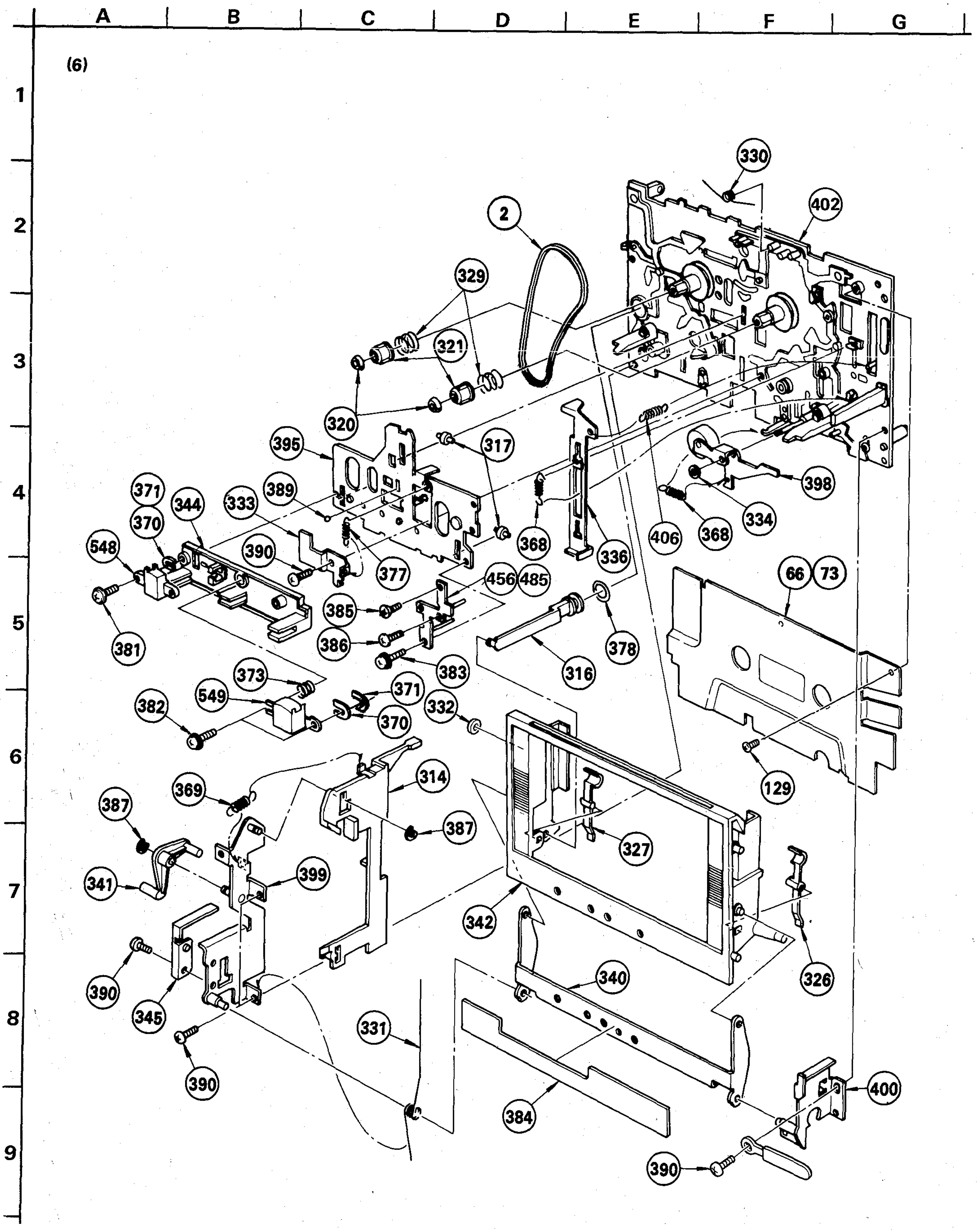
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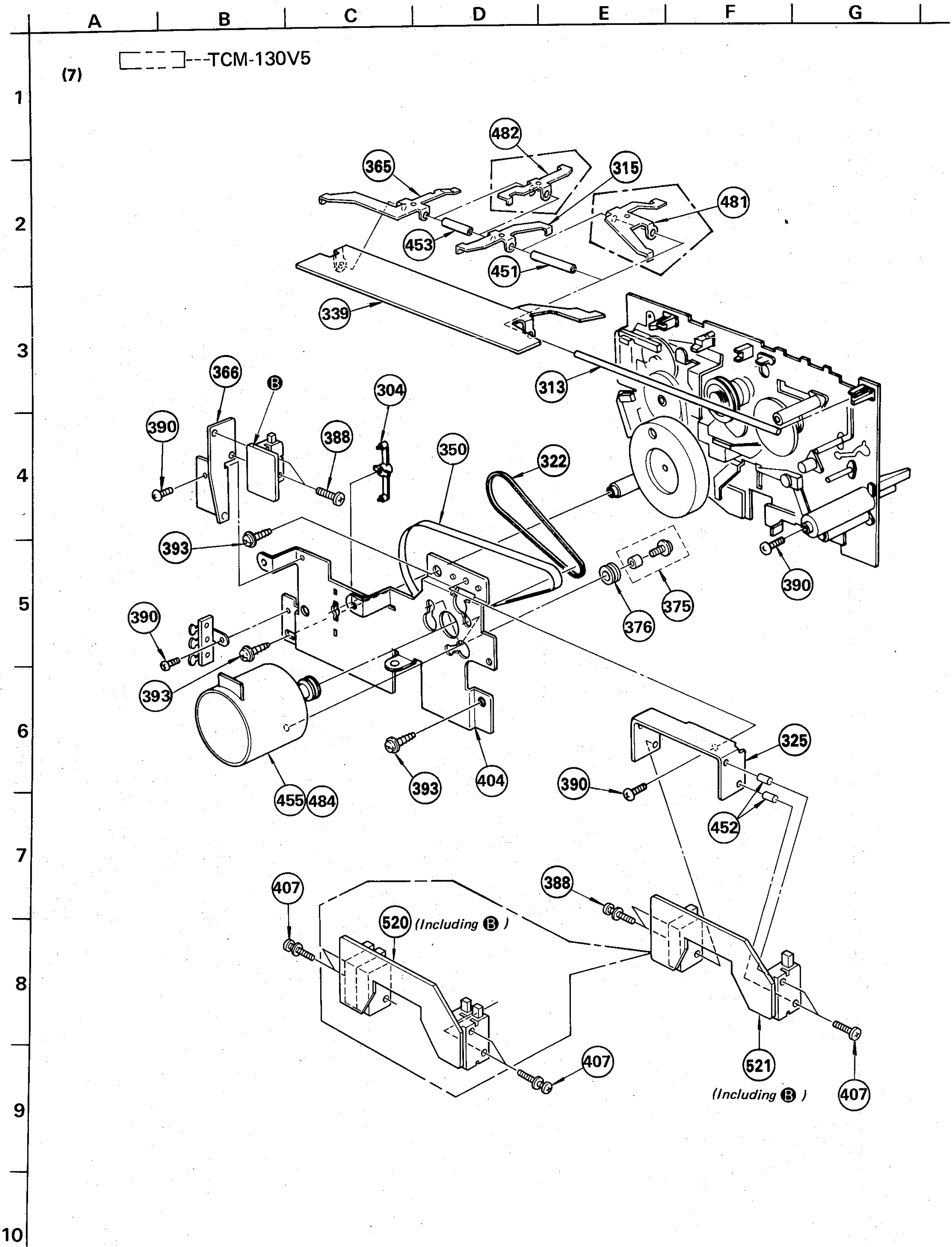
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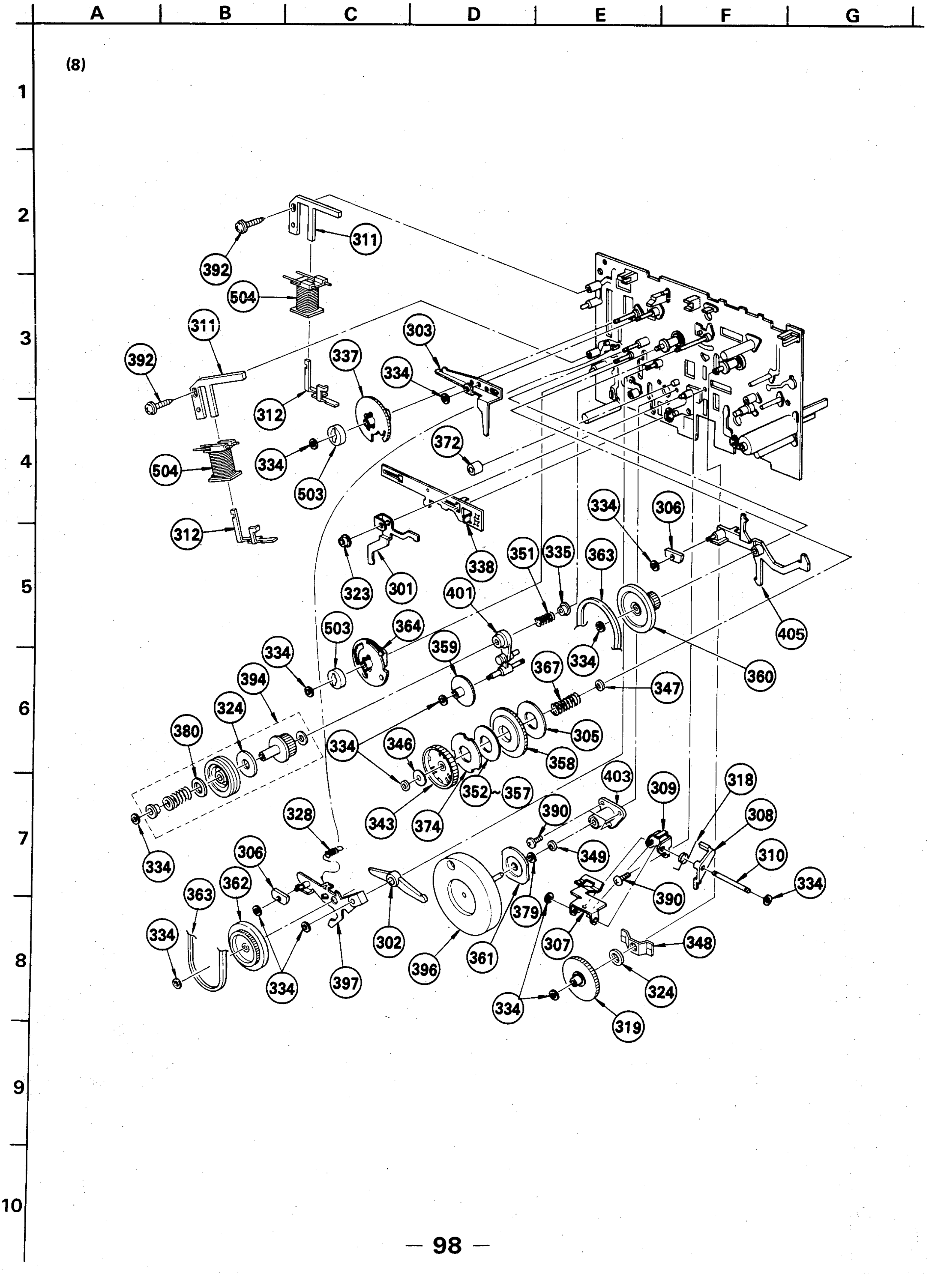
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GENERAL SECTION

No.	Part No.	Description
1	2-299-301-11	KNOB, SLIDE
2	3-513-059-XX	BELT, SHUT-OFF
3	3-558-708-01	WASHER, STOPPER
4	3-558-708-21	WASHER, STOPPER
5	3-575-701-32	KNOB, HEADPHONE
6	3-642-629-00	SPRING, COMPRESSION
7	♠;3-675-364-00	CASE (C) (MAIN), SHIELD
8	♠;3-675-365-00	CASE (C) (LID), SHIELD
9	♠;3-675-366-00	CASE (C) (BOTTOM), SHIELD
10	3-701-438-11	WASHER, 2.5
11	3-701-439-11	WASHER
12	3-701-441-11	WASHER
13	♠;3-701-948-13	LABEL, FUSE
14	♠;3-701-948-14	LABEL, FUSE
15	♠;3-701-948-16	(AEP)....LABEL, FUSE
16	3-703-244-00	BUSHING, CORD
17	3-703-708-01	STICKER, SONY SYMBOL (18)
18	3-831-441-XX	PLATE, BLIND
19	3-837-172-00	SPRING
20	3-846-014-00	DRUM, DIAL
21	4-308-851-00	PURSE LOCK
22	4-812-134-11	RIVET NYLON, 3.5
23	4-836-828-00	EMBLEM, SONY
24	4-864-307-00	RING
25	4-864-328-42	KNOB (4X10), SQUARE
26	4-865-156-22	KNOB, EJECT
27	4-874-038-32	KNOB, R (DIA.16)
28	♠;4-880-329-00	PLATE (E), SHIELD
29	♠;4-880-837-11	HEAT SINK
30	4-881-704-72	KNOB, SQUARE (5X16)
31	4-881-705-21	KNOB (5X6), SQUARE
32	4-881-705-31	KNOB (5X6), SQUARE
33	4-881-705-42	KNOB (5X6), SQUARE
34	4-881-725-00	RING (TACT), FLEXIBLE
35	4-887-502-00	SHEET, INSTRUCTION, 8P PIN JACK
36	4-887-504-00	SHEET, INSTRUCTION, ANTENNA
37	4-887-506-00	SHEET, INSTRUCTION, SPEAKER
38	4-887-509-00	(AEP)...LABEL, MODEL NUMBER (AEP)
38	4-887-643-00	(UK)....LABEL, MODEL NUMBER (UK)
39	♠;4-887-511-00	(AEP)...BRACKET, AC CORD
39	♠;4-887-644-00	(UK)....BRACKET, AC CORD
40	♠;4-887-513-00	PLATE (A), SHIELD
41	♠;4-887-514-00	PLATE (B), SHIELD
42	♠;4-887-515-00	BRACKET, TRANSFORMER

GENERAL SECTION

No.	Part No.	Description
43	♠;4-887-517-00	BRACKET, PIN JACK
44	♠;4-887-518-00	BRACKET (3), MICROPHONE VOL
45	♠;4-887-519-00	BRACKET, P.C
46	♠;4-887-520-00	BRACKET, COUNTER
47	♠;4-887-521-00	BRACKET, COUPLER
48	♠;4-887-522-00	BRACKET (R), TC
49	4-887-523-00	HINGE
50	♠;4-887-524-00	GUIDE (A), EJECT
51	♠;4-887-525-00	LEVER, EJECT
52	♠;4-887-526-00	GUIDE (B), EJECT
53	♠;4-887-529-00	BRACKET, POWER SWITCH
54	♠;4-887-530-00	DISK
55	♠;4-887-533-00	ESCUTCHEON, P.C
56	♠;4-887-534-00	BUTTON (A), CONTROL
57	♠;4-887-535-00	BUTTON (B), CONTROL
58	♠;4-887-536-00	BUTTON (C), CONTROL
59	4-887-538-00	COVER, WHEEL
60	♠;4-887-540-00	PULLEY, COUNTER
61	4-887-542-01	KNOB, SLIDE
62	4-887-542-11	KNOB, SLIDE
63	4-887-545-00	BELT, ORNAMENTAL
64	4-887-546-00	KNOB, SLIDE SWITCH
65	4-887-547-00	POINTER
66	4-887-548-00	KNOB (17X19), SQUARE
67	4-887-550-00	BELT, FLAT
68	4-887-553-00	PLATE (B), ORNAMENTAL, MD
69	♠;4-887-557-00	PLATE, ORNAMENTAL, METER
70	4-887-559-01	EMBLEM, CASSETTE
71	4-887-559-11	EMBLEM, CASSETTE
72	4-887-560-00	BOARD (A), CONTROL
73	4-887-561-00	BOARD (B), CONTROL
74	♠;4-887-565-00	SPACER (2.65X9)
75	4-887-570-00	PLATE (A), ORNAMENTAL, MD
76	♠;4-887-572-00	BRACKET, MICROPHONE JACK
77	♠;4-887-573-00	BRACKET, HEADPHONE
78	♠;4-887-574-00	BRACKET (LEFT), FRONT PANEL
79	♠;4-887-575-00	BRACKET (RIGHT), FRONT PANEL
80	♠;4-887-576-00	BRACKET (1), MICROPHONE VOL
81	♠;4-887-577-00	BRACKET (2), MICROPHONE VOL
82	♠;4-887-578-00	BRACKET (B1), TC
83	♠;4-887-579-00	PLATE, RELAY
84	♠;4-887-580-00	REINFORCEMENT (B), FRONT PANEL
85	♠;4-887-581-00	BRACKET (B2), TC
86	♠;4-887-582-00	BRACKET, HEAT SINK
87	♠;4-887-583-00	BRACKET, CONTROL

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MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
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COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

GENERAL SECTION

No.	Part No.	Description
88	♠;4-887-584-00	BRACKET, METER
89	4-887-586-00	JOINT (LEFT), KNOB
90	4-887-587-00	JOINT (RIGHT), KNOB
91	4-887-588-01	ESCUTCHEON, KNOB
92	4-887-588-11	ESCUTCHEON, KNOB
93	♠;4-887-589-00	GUIDE, KNOB
94	4-887-590-00	HANDLE
95	♠;4-887-594-00	REINFORCEMENT (A), FRONT PANEL
96	♠;4-887-596-00	PLATE, SHIELD, TRANSFORMER
97	♠;4-887-597-00	BRACKET (A), TC
98	♠;4-887-598-00	PLATE, TOP
99	♠;4-887-599-00	PLATE, BOTTOM
100	♠;4-887-600-00	PLATE, SIDE
101	4-887-601-00	PLATE, TOP, ORNAMENTAL
102	♠;4-887-602-00	PLATE, BOTTOM, ORNAMENTAL
103	4-887-603-00	PLATE, SIDE, ORNAMENTAL
104	4-887-605-01	ESCUTCHEON, CONTROL BUTTON
105	4-887-605-11	ESCUTCHEON, CONTROL BUTTON
106	4-887-606-00	CORNER BLOCK (A)
107	4-887-607-00	CORNER BLOCK (B)
108	4-887-608-00	HOLDER, HANDLE
109	4-887-609-00	PANEL, TUNER
110	4-887-614-00	PANEL (RIGHT), BACK
111	4-887-615-00	PANEL (LEFT), BACK
112	♠;4-887-617-00	PLATE, SHIELD, POWER PC BOARD
113	4-887-619-00	SHEET, INSTRUCTION
114	4-887-620-00	HOLDER, ANTENNA
115	♠;4-887-621-00	REINFORCEMENT (C), FRONT PANEL
116	♠;4-887-622-00	REINFORCEMENT (D), FRONT PANEL
117	♠;4-887-623-00	REFLECTOR
118	♠;4-887-633-00	REINFORCEMENT, BACK PANEL
119	4-887-639-00	LABEL, CONNECTION, ANTENNA
120	♠;4-887-641-00	RETAINER, PC BOARD
121	♠;4-887-642-00	GUIDE, METER
122	7-621-775-10	SCREW +B 2.6X4
123	7-623-616-01	EYELET, 2X3
124	7-624-105-04	STOP RING 2.3, TYPE -E
125	7-624-106-04	STOP RING 3.0, TYPE -E
126	7-633-120-45	STRING, TETRON DIAL (0.5MM)
127	7-682-546-09	SCREW +B 3X5
128	7-682-574-09	SCREW +B 5X8
129	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT
130	7-685-532-19	SCREW +BTP 2.6X5 TYPE2 N-S
131	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S
132	7-685-647-14	SCREW +BVTP 3X10 TYPE2 N-S

GENERAL SECTION

No.	Part No.	Description
133	7-685-648-71	SCREW +BVTP 3X12 TYPE2 SLIT
134	7-685-650-21	SCREW +BVTP 3X16 TYPE2 SLIT
135	7-685-660-11	SCREW +BVTP 4X10 TYPE2 N-S
136	7-685-870-09	SCREW +BVTT 3X5 (S)
137	7-685-871-01	SCREW +BVTT 3X6 (S)
138	7-685-872-01	SCREW +BVTT 3X8 (S)
139	7-685-874-01	SCREW +BVTT 3X12 (S)
140	7-685-881-01	SCREW +BVTT 4X8 (S)
141	9-911-835-XX	PAD, KNOB
142	9-911-852-XX	CUSHION
143	9-911-863-XX	SPACER
144	X-4887-501-0	KNOB (DIA. 15) ASSY, R
145	X-4887-502-0	KNOB (DIA. 15) ASSY, R
146	X-4887-503-0	KNOB (DIA. 15) ASSY, R
147	X-4887-504-0	KNOB (DIA. 15) ASSY, R
148	X-4887-505-0	KNOB (DIA. 15) ASSY, R
149	♠;X-4887-506-0	BRACKET ASSY, PULLEY SHAFT
150	X-4887-507-0	WINDOW ASSY, CASSETTE
151	♠;X-4887-508-0	FLYWHEEL ASSY
152	X-4887-509-0	WHEEL ASSY, TUNING
153	X-4887-510-0	FOOT ASSY
154	♠;X-4887-511-0	FRAME ASSY, TUNER
155	X-4887-516-0	KNOB (COPY) ASSY
156	X-4887-517-0	KNOB (PLAY) ASSY
157	X-4887-518-0	KNOB (MIXING) ASSY
158	X-4887-519-0	KNOB (TAPE) ASSY
159	X-4887-520-0	KNOB (TUNER) ASSY
160	X-4887-522-0	KNOB (CD/AUX) ASSY
161	X-4887-523-0	KNOB (PHONO) ASSY
162	X-4887-524-1	PANEL (B) ASSY
163	X-4887-530-1	PANEL (A) ASSY
164	X-4887-527-1	DRUM, SCALE ASSY
165	3-701-690-00	(UK)....LABEL (MADE IN JAPAN)
166	♠;3-703-677-00	(UK)....LABEL, CAUTION, MAIN, NEW UL

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UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
201	1-501-161-00	ANTENNA, FEEDER
202	3-701-630-00	BAG, POLYETHYLENE
203	3-773-338-11	MANUAL, INSTRUCTION
204	4-885-192-00	SHEET, PROTECTION
205	4-887-628-00	CUSHION, UPPER
206	4-887-629-00	CUSHION, LOWER
207	4-887-630-00	COVER, DUST
208	4-887-625-00	BAG, PROTECTION
209	4-887-640-99	INDIVIDUAL CARTON
210	X-3701-105-0	ROD ASSY, CLEANING, HEAD

MECHANISM SECTION

No.	Part No.	Description
301	♠;3-307-301-00	LEVER (RELAY), FWD SELECT
302	3-307-307-00	LEVER, FWD
303	3-307-308-00	LEVER, FF
304	3-307-309-00	RETAINER (A), THRUST
305	3-307-313-00	PLATE, YOKE
306	3-307-315-00	ARBOR, MOVABLE
307	3-307-319-00	RETAINER, TAKE-UP GEAR
308	3-307-328-00	LEVER, TAKE-UP SELECTION
309	♠;3-307-329-00	PLATE, FULCRUM, SELECTION LEVER
310	3-307-330-00	PIN, FULCRUM PLATE
311	3-307-332-00	ARBOR, FIXED
312	3-307-333-00	ARBOR, TRIGGER
313	♠;3-307-339-00	SHAFT, DETECTION LEVER
314	3-307-345-00	SLIDER, EJECT
315	♠;3-307-346-00	LEVER, DETECTION
316	3-307-347-00	PISTON
317	3-307-348-00	ROLLER
318	3-307-355-00	SPRING
319	3-307-360-00	GEAR (S), REEL
320	3-307-362-00	CAP, REEL
321	3-307-363-00	CLAW (N), REEL
322	3-307-366-00	BELT, FAST FORWARD
323	3-307-367-00	BUSHING, SELECT LEVER
324	3-307-369-00	FELT, LIMITER
325	♠;3-307-370-00	BRACKET, SWITCH
326	3-307-371-00	SPRING (LEFT)
327	3-307-372-00	SPRING (RIGHT)
328	3-307-378-00	SPRING, TENSION
329	3-307-380-00	SPRING, COMPRESSION
330	3-307-382-00	SPRING
331	3-307-383-00	SPRING
332	3-307-390-00	BUSHING, LOADING SPRING
333	3-307-391-00	SPRING
334	3-307-394-00	RETAINER (B), THRUST
335	3-307-395-00	RETAINER, SPRING
336	3-307-397-00	SLIDER, PAUSE
337	3-307-401-00	GEAR, FF CAM
338	♠;3-307-403-00	SLIDER, FWD
339	♠;3-307-404-00	RETAINER, DETECTION SWITCH
340	♠;3-307-405-00	PLATE, FULCRUM, CASSETTE HOLDER
341	3-307-406-00	LEVER, EJECT
342	3-307-407-12	HOLDER, CASSETTE
343	3-307-412-00	GEAR, TAKE-UP REEL
344	3-307-414-00	BRACKET, HEAD
345	3-307-416-00	STOPPER, LOADING

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MECHANISM SECTION

No.	Part No.	Description
346	3-307-465-00	RETAINER, TAKE-UP
347	♠ 3-307-467-00	PLATE, SPRING
348	3-307-475-00	PLATE, TENSION, BACK
349	3-307-482-00	WASHER, LUMILER
350	3-307-483-00	BELT (R), CAPSTAN
351	3-307-486-00	SPRING, COMPRESSION
352	3-307-493-01	SPACER
353	3-307-493-11	SPACER
354	3-307-493-21	SPACER
355	3-307-493-31	SPACER
356	3-307-493-41	SPACER
357	3-307-493-51	SPACER
358	3-307-953-00	MAGNET, REEL TABLE
359	3-307-970-00	GEAR, FR
360	3-312-405-00	PULLEY, DRIVING
361	3-312-406-00	GEAR (T), PINION
362	3-312-408-00	GEAR (B), CONVERSION
363	3-312-409-00	BELT, DRIVING
364	3-312-412-00	GEAR (B), CAM, FWD
365	♠ 3-312-424-00	LEVER, HALF SWITCH
366	3-312-425-00	BRACKET (B), SWITCH
367	3-312-429-00	SPRING, COMPRESSION
368	3-312-432-00	SPRING, TENSION
369	3-507-243-00	SPRING, TENSION
370	3-513-237-01	PLATE
371	3-513-237-11	PLATE
372	3-538-051-00	RUBBER, BRAKE
373	3-539-237-00	SPRING (3), COMPRESSION
374	3-561-827-00	PLATE (A), HYSTERESIS
375	3-570-027-00	SCREW, MOTOR
376	3-570-118-00	CUSHION, MOTOR
377	3-570-895-00	SPRING, TENSION
378	3-575-392-00	RING, PISTON
379	3-701-438-11	WASHER, 2.5
380	3-701-444-21	WASHER, 6
381	3-701-465-00	SCREW, LOCK
382	3-701-466-00	SCREW, LOCK
383	3-701-467-00	SCREW, LOCK
384	3-831-441-XX	PLATE, BLIND
385	7-621-555-35	SCREW +K 2X5
386	7-621-772-00	SCREW +B 2X3
387	7-624-105-04	STOP RING 2.3, TYPE -E
388	7-628-254-35	SCREW +PS 2.6X10
389	7-671-111-11	STEEL, BOUL 1.5MM
390	7-685-860-04	SCREW +BVTT 2.6X4 (S)

MECHANI SECTION

No.	Part No.	Description
391	7-685-870-01	SCREW +BVTT 3X5 (S)
392	7-687-204-21	TOTSU PTPWH 2X6 NON-SLIT, TYPE2
393	7-687-246-21	SCREW, TOTSU PTPWH 3X8, TYPE2
394	A-2142-022-A	PULLEY ASSY, FR
395	X-3307-301-0	CHASSIS (N) ASSY, HEAD
396	X-3307-302-5	FLYWHEEL (N) ASSY
397	♠ X-3307-305-0	LEVER ASSY, FWD LOCK
398	X-3307-307-5	PINCH ROLLER (N) ASSY
399	♠ X-3307-309-0	PLATE (LEFT) ASSY, SIDE
400	♠ X-3307-310-0	PLATE (RIGHT) ASSY, SIDE
401	X-3307-312-0	LEVER ASSY, FR
402	X-3307-330-1	CHASSIS (N) ASSY, MECHANICAL
403	X-3307-338-0	BEARING ASSY, CAPSTAN
404	X-3307-345-0	RETAINER, THRUST
405	X-3307-348-0	LEVER ASSY, FF LOCK
406	3-307-374-00	SPRING, TENSION
407	7-628-254-55	SCREW +PS 2.6X16

TCM-130V4

No.	Part No.	Description
451	♠ 3-312-427-00	SPACER (3X22)
452	♠ 3-312-438-00	SPACER
453	4-855-006-01	SPACER (3X12)
454	....	
455	X-3307-346-0	MOTOR (N) ASSY
456	X-3307-920-0	PLATE ASSY, ADJUSTMENT

TCM-130V5

No.	Part No.	Description
481	3-307-337-00	DETECTION LEVER, REC
482	3-307-338-00	DETECTION LEVER, METAL
483	....	
484	X-3307-308-0	MOTOR (N) ASSY
485	X-3307-328-0	PLATE ASSY, ADJUSTMENT

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In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	1-402-021-00	ANTENNA, LOOP (LW/MW)
502	1-407-178-XX	MICRO INDUCTOR (LF-4)
503	1-452-202-00	MAGNET
504	1-454-316-00	SOLENOID, PLUNGER
505	1-507-788-00	JACK, PIN 4P
506	♠;1-508-832-12	H TYPE BASE POST
507	1-520-457-00	METER (LED INDICATOR)
508	⚠.1-526-694-00	(AEP)...OUTLET, AC
509	1-533-131-00	HOLDER, FUSE
510	⚠.1-534-817-XX	(AEP)...CORD, POWER, EULO PLUG
510	⚠.1-551-884-00	(UK)....CORD, POWER
511	♠;1-535-136-00	BASE POST 14MM (10MM PITCH) 3P
512	♠;1-535-416-00	TERMINAL
513	1-536-401-XX	C-TYPE 2L2 LUG TERMINAL STRIP
514	....	
515	1-536-523-00	TERMINAL, GROUNDING
516	1-536-684-00	TERMINAL BOARD (4P)
517	1-536-705-00	TERMINAL BOARD (SP)
518	1-548-536-81	COUNTER
519	♠;1-560-061-00	PIN, CONNECTOR 3P
520	♠;1-560-063-00	PIN, CONNECTOR 5P
521	♠;1-609-613-00	PC BOARD, SWITCH (A)
522	♠;1-609-614-00	PC BOARD, SWITCH (B)
523	♠;1-609-616-00	PC BOARD, TC-B
524	♠;1-609-617-00	PC BOARD, KEY BOARD (B)
525	♠;1-609-618-00	PC BOARD, TIMER
526	♠;1-609-619-00	PC BOARD, SP TERMINAL
527	♠;1-609-620-00	PC BOARD, PHOTO COUPLER
528	♠;1-609-621-00	PC BOARD, LED
529	♠;1-609-622-00	PC BOARD, TUNER
530	♠;1-609-623-00	PC BOARD, FUSE
531	♠;1-609-624-00	PC BOARD, LED
532	♠;1-609-625-00	PC BOARD, TC-A
533	♠;1-609-626-00	PC BOARD, KEY BOARD (A)
534	♠;1-609-627-00	PC BOARD, SHUT-OFF
535	♠;1-609-628-00	PC BOARD, PITCH CONTROL
536	♠;1-609-629-00	PC BOARD, CH1
537	♠;1-609-630-00	PC BOARD, CH2
538	♠;1-609-531-00	PC BOARD, CH3
539	♠;1-609-633-00	PC BOARD, HEADPHONE
540	♠;1-609-634-00	PC BOARD, MIC JACK
541	♠;1-609-635-00	PC BOARD, MASTER LEVEL
542	♠;1-609-636-00	PC BOARD, REMOTE CONTROL
543	♠;1-609-637-00	PC BOARD, FUNCTION

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
544	♠;1-609-638-00	PC BOARD, CONSTANT VOLTAGE (1)			
545	♠;1-609-639-00	PC BOARD, CONSTANT VOLTAGE (2)			
546	♠;1-609-640-00	PC BOARD, CONSTANT VOLTAGE (3)			
547	♠;1-609-641-00	PC BOARD, G.E			
548	♠;1-609-642-00	PC BOARD, POWER			
549	....				
550	....				
551	♠;A-4351-353-A	MOUNTED PCB, TUNER			
552	♠;A-4363-031-A	MOUNTED PCB, CHANNEL (1)			
553	♠;A-4363-032-A	MOUNTED PCB, CHANNEL (2)			
554	♠;A-4363-033-A	MOUNTED PCB, CHANNEL (3)			
555	♠;A-4363-034-A	MOUNTED PCB, CHANNEL (4)			
556	♠;A-4375-172-A	MOUNTED PCB, G.E			
557	♠;A-4393-023-A	MOUNTED PCB, TC (A)			
558	♠;A-4393-024-A	MOUNTED PCB, TC (B)			
559	♠;A-4409-726-A	MOUNTED PCB, FUNCTION			
BPF001	1-231-313-00	BANDPASS FILTER			
BU1401	1-464-258-00	OSCILLATION UNIT, BIAS			
C001	1-161-255-00	CERAMIC	4.7PF	10%	50V
C002	1-161-251-00	CERAMIC	2.2PF	10%	50V
C003	1-102-960-00	CERAMIC	24PF	5%	50V
C004	1-102-959-00	CERAMIC	22PF	5%	50V
C005	1-101-005-00	CERAMIC	0.022MF		50V
C006	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C007	1-101-005-00	CERAMIC	0.022MF		50V
C008	1-101-005-00	CERAMIC	0.022MF		50V
C009	1-101-005-00	CERAMIC	0.022MF		50V
C011	1-101-005-00	CERAMIC	0.022MF		50V
C012	1-101-005-00	CERAMIC	0.022MF		50V
C013	1-123-379-00	ELECT	0.47MF	20%	50V
C014	1-102-681-00	CERAMIC	2PF	0.25PF	50V
C015	1-102-934-00	CERAMIC	1PF	0.25PF	50V
C016	1-102-602-00	CERAMIC	27PF	5%	50V
C017	1-102-684-00	CERAMIC	8PF	0.5PF	50V
C018	1-102-684-00	CERAMIC	8PF	0.5PF	50V
C019	1-102-806-00	CERAMIC	27PF	5%	50V
C020	1-161-494-00	CERAMIC	0.022MF	30%	25V
C021	1-102-807-00	CERAMIC	5PF	1PF	50V
C023	1-102-294-00	CERAMIC	18PF	5%	50V
C024	1-104-066-00	POLYSTYRENE	360PF	5%	50V
C025	1-101-005-00	CERAMIC	0.022MF		50V
C026	1-102-824-00	CERAMIC	430PF	5%	50V
C027	1-101-005-00	CERAMIC	0.022MF		50V
C028	1-123-356-00	ELECT	10MF	20%	50V
C029	1-101-005-00	CERAMIC	0.022MF		50V

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The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C030	1-101-005-00	CERAMIC	0.022MF		50V
C031	1-123-356-00	ELECT	10MF	20%	50V
C032	1-102-961-00	CERAMIC	27PF	5%	50V
C033	1-102-945-00	CERAMIC	8PF	1PF	50V
C034	1-101-884-00	CERAMIC	56PF	5%	50V
C035	1-103-704-00	POLYSTYRENE	130PF	5%	50V
C036	1-123-307-00	ELECT	100MF	20%	10V
C037	1-101-005-00	CERAMIC	0.022MF		50V
C038	1-101-005-00	CERAMIC	0.022MF		50V
C039	1-101-005-00	CERAMIC	0.022MF		50V
C040	1-101-005-00	CERAMIC	0.022MF		50V
C041	1-123-379-00	ELECT	0.47MF	20%	50V
C042	1-101-004-00	CERAMIC	0.01MF		50V
C043	1-101-005-00	CERAMIC	0.022MF		50V
C044	1-123-484-00	ELECT	100MF	20%	16V
C045	1-101-004-00	CERAMIC	0.01MF		50V
C046	1-102-119-00	CERAMIC	0.0015MF	10%	50V
C047	1-123-381-00	ELECT	2.2MF	20%	50V
C048	1-101-005-00	CERAMIC	0.022MF		50V
C049	1-123-484-00	ELECT	100MF	20%	16V
C050	1-123-307-00	ELECT	100MF	20%	10V
C051	1-161-494-00	CERAMIC	0.022MF	30%	25V
C052	1-123-356-00	ELECT	10MF	20%	50V
C053	1-130-481-00	MYLAR	0.0068MF	5%	50V
C054	1-123-379-00	ELECT	0.47MF	20%	50V
C055	1-130-624-00	FILM	0.022MF	5%	50V
C056	1-123-379-00	ELECT	0.47MF	20%	50V
C057	1-130-635-00	FILM	0.18MF	5%	50V
C058	1-104-077-00	POLYSTYRENE	0.001MF	5%	50V
C059	1-123-332-00	ELECT	47MF	20%	16V
C060	1-101-005-00	CERAMIC	0.022MF		50V
C062	1-130-491-00	MYLAR	0.047MF	5%	50V
C063	1-123-379-00	ELECT	0.47MF	20%	50V
C064	1-123-380-00	ELECT	1MF	20%	50V
C065	1-123-381-00	ELECT	2.2MF	20%	50V
C066	1-123-356-00	ELECT	10MF	20%	50V
C067	1-123-380-00	ELECT	1MF	20%	50V
C068	1-102-117-00	CERAMIC	820PF	10%	50V
C069	1-102-117-00	CERAMIC	820PF	10%	50V
C070	1-130-483-00	MYLAR	0.01MF	5%	50V
C071	1-130-483-00	MYLAR	0.01MF	5%	50V
C072	1-123-369-00	ELECT	4.7MF	20%	50V
C073	1-123-369-00	ELECT	4.7MF	20%	50V
C074	1-130-481-00	MYLAR	0.0068MF	5%	50V
C075	1-130-481-00	MYLAR	0.0068MF	5%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C076	1-130-479-00	MYLAR	0.0047MF	5%	50V
C077	1-130-479-00	MYLAR	0.0047MF	5%	50V
C078	1-130-481-00	MYLAR	0.0068MF	5%	50V
C079	1-130-481-00	MYLAR	0.0068MF	5%	50V
C080	1-123-380-00	ELECT	1MF	20%	50V
C081	1-123-356-00	ELECT	10MF	20%	50V
C082	1-102-978-00	CERAMIC	220PF	5%	50V
C083	1-101-005-00	CERAMIC	0.022MF		50V
C084	1-102-952-00	CERAMIC	16PF	5%	50V
C085	1-101-005-00	CERAMIC	0.022MF		50V
C086	1-130-632-00	FILM	0.1MF	5%	50V
C101	1-108-587-00	MYLAR	0.022MF	5%	50V
C102	1-102-114-00	CERAMIC	470PF	10%	50V
C103	1-102-947-00	CERAMIC	10PF	5%	50V
C104	1-123-484-00	ELECT	100MF	20%	16V
C105	1-123-380-00	ELECT	1MF	20%	50V
C120	1-123-380-00	ELECT	1MF	20%	50V
C121	1-102-973-00	CERAMIC	100PF	5%	50V
C122	1-123-380-00	ELECT	1MF	20%	50V
C123	1-123-484-00	ELECT	100MF	20%	16V
C151	1-108-587-00	MYLAR	0.022MF	5%	50V
C152	1-102-114-00	CERAMIC	470PF	10%	50V
C153	1-102-947-00	CERAMIC	10PF	5%	50V
C154	1-123-484-00	ELECT	100MF	20%	16V
C155	1-123-380-00	ELECT	1MF	20%	50V
C170	1-123-380-00	ELECT	1MF	20%	50V
C171	1-102-973-00	CERAMIC	100PF	5%	50V
C172	1-123-380-00	ELECT	1MF	20%	50V
C201	1-108-587-00	MYLAR	0.022MF	5%	50V
C202	1-102-114-00	CERAMIC	470PF	10%	50V
C203	1-102-947-00	CERAMIC	10PF	5%	50V
C204	1-123-484-00	ELECT	100MF	20%	16V
C205	1-123-380-00	ELECT	1MF	20%	50V
C206	1-102-973-00	CERAMIC	100PF	5%	50V
C207	1-102-973-00	CERAMIC	100PF	5%	50V
C220	1-123-380-00	ELECT	1MF	20%	50V
C221	1-102-973-00	CERAMIC	100PF	5%	50V
C222	1-123-380-00	ELECT	1MF	20%	50V
C223	1-123-484-00	ELECT	100MF	20%	16V
C224	1-102-973-00	CERAMIC	100PF	5%	50V
C225	1-102-973-00	CERAMIC	100PF	5%	50V
C231	1-123-380-00	ELECT	1MF	20%	50V
C232	1-102-973-00	CERAMIC	100PF	5%	50V
C233	1-102-973-00	CERAMIC	100PF	5%	50V
C234	1-123-380-00	ELECT	1MF	20%	50V

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Ref.No.	Part No.	Description			
C235	1-123-474-00	ELECT	100MF	20%	10V
C251	1-108-587-00	MYLAR	0.022MF	5%	50V
C252	1-102-114-00	CERAMIC	470PF	10%	50V
C253	1-102-947-00	CERAMIC	10PF	5%	50V
C254	1-123-484-00	ELECT	100MF	20%	16V
C255	1-123-380-00	ELECT	1MF	20%	50V
C256	1-102-973-00	CERAMIC	100PF	5%	50V
C257	1-102-973-00	CERAMIC	100PF	5%	50V
C270	1-123-380-00	ELECT	1MF	20%	50V
C271	1-102-973-00	CERAMIC	100PF	5%	50V
C272	1-123-380-00	ELECT	1MF	20%	50V
C274	1-102-973-00	CERAMIC	100PF	5%	50V
C275	1-102-973-00	CERAMIC	100PF	5%	50V
C281	1-123-380-00	ELECT	1MF	20%	50V
C282	1-102-973-00	CERAMIC	100PF	5%	50V
C283	1-102-973-00	CERAMIC	100PF	5%	50V
C284	1-123-380-00	ELECT	1MF	20%	50V
C301	1-123-380-00	ELECT	1MF	20%	50V
C302	1-102-973-00	CERAMIC	100PF	5%	50V
C303	1-123-356-00	ELECT	10MF	20%	25V
C304	1-123-380-00	ELECT	1MF	20%	50V
C305	1-123-380-00	ELECT	1MF	20%	50V
C306	1-102-973-00	CERAMIC	100PF	5%	50V
C307	1-102-959-00	CERAMIC	22PF	5%	50V
C309	1-123-474-00	ELECT	100MF	20%	10V
C310	1-123-474-00	ELECT	100MF	20%	10V
C311	1-102-973-00	CERAMIC	100PF	5%	50V
C312	1-102-110-00	CERAMIC	220PF	10%	50V
C313	1-108-563-00	MYLAR	0.0022MF	5%	50V
C314	1-108-579-00	MYLAR	0.01MF	5%	50V
C315	1-123-356-00	ELECT	10MF	20%	25V
C316	1-108-587-00	MYLAR	0.022MF	5%	50V
C317	1-130-632-00	FILM	0.1MF	5%	50V
C318	1-123-356-00	ELECT	10MF	20%	25V
C319	1-123-484-00	ELECT	100MF	20%	16V
C320	1-123-484-00	ELECT	100MF	20%	16V
C321	1-102-973-00	CERAMIC	100PF	5%	50V
C322	1-102-973-00	CERAMIC	100PF	5%	50V
C401	1-123-380-00	ELECT	1MF	20%	50V
C402	1-102-973-00	CERAMIC	100PF	5%	50V
C403	1-123-356-00	ELECT	10MF	20%	25V
C404	1-123-380-00	ELECT	1MF	20%	50V
C405	1-123-380-00	ELECT	1MF	20%	50V
C406	1-102-973-00	CERAMIC	100PF	5%	50V
C407	1-102-959-00	CERAMIC	22PF	5%	50V

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Ref.No.	Part No.	Description			
C409	1-123-474-00	ELECT	100MF	20%	10V
C410	1-123-474-00	ELECT	100MF	20%	10V
C411	1-102-973-00	CERAMIC	100PF	5%	50V
C412	1-102-110-00	CERAMIC	220PF	10%	50V
C413	1-108-563-00	MYLAR	0.0022MF	5%	50V
C414	1-108-579-00	MYLAR	0.01MF	5%	50V
C415	1-123-356-00	ELECT	10MF	20%	25V
C416	1-108-587-00	MYLAR	0.022MF	5%	50V
C417	1-130-632-00	FILM	0.1MF	5%	50V
C418	1-123-356-00	ELECT	10MF	20%	25V
C419	1-123-484-00	ELECT	100MF	20%	16V
C420	1-123-484-00	ELECT	100MF	20%	16V
C421	1-102-973-00	CERAMIC	100PF	5%	50V
C422	1-102-973-00	CERAMIC	100PF	5%	50V
C501	1-102-973-00	CERAMIC	100PF	5%	50V
C502	1-102-973-00	CERAMIC	100PF	5%	50V
C503	1-102-973-00	CERAMIC	100PF	5%	50V
C504	1-102-973-00	CERAMIC	100PF	5%	50V
C505	1-102-973-00	CERAMIC	100PF	5%	50V
C521	1-123-356-00	ELECT	10MF	20%	25V
C553	1-102-973-00	CERAMIC	100PF	5%	50V
C571	1-123-356-00	ELECT	10MF	20%	25V
C601	1-123-354-00	ELECT	3.3MF	20%	50V
C602	1-102-106-00	CERAMIC	100PF	10%	50V
C603	1-102-106-00	CERAMIC	100PF	10%	50V
C604	1-102-106-00	CERAMIC	100PF	10%	50V
C605	1-123-611-00	ELECT	1MF	20%	50V
C606	1-123-607-00	ELECT	0.1MF	20%	50V
C607	1-123-610-00	ELECT	0.47MF	20%	50V
C608	1-130-629-00	FILM	0.056MF	5%	50V
C609	1-123-608-00	ELECT	0.22MF	20%	50V
C610	1-130-626-00	FILM	0.033MF	5%	50V
C611	1-123-607-00	ELECT	0.1MF	20%	50V
C613	1-130-622-00	FILM	0.015MF	5%	50V
C614	1-130-630-00	FILM	0.068MF	5%	50V
C615	1-108-575-00	MYLAR	0.0068MF	5%	50V
C616	1-130-626-00	FILM	0.033MF	5%	50V
C617	1-108-567-00	MYLAR	0.0033MF	5%	50V
C618	1-130-622-00	FILM	0.015MF	5%	50V
C619	1-108-561-00	MYLAR	0.0018MF	5%	50V
C620	1-108-577-00	MYLAR	0.0082MF	5%	50V
C621	1-102-117-00	CERAMIC	820PF	10%	50V
C622	1-108-569-00	MYLAR	0.0039MF	5%	50V
C623	1-102-113-00	CERAMIC	390PF	10%	50V
C624	1-123-354-00	ELECT	3.3MF	20%	50V

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SEMICONDUCTORS

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UA···: μA···, UPA···: μPA···, UPC···: μPC,
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ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C625	1-123-354-00	ELECT	3.3MF	20%	50V
C626	1-102-106-00	CERAMIC	100PF	10%	50V
C627	1-102-106-00	CERAMIC	100PF	10%	50V
C628	1-123-485-00	ELECT	220MF	20%	16V
C629	1-123-356-00	ELECT	10MF	20%	25V
C630	1-123-485-00	ELECT	220MF	20%	16V
C631	1-102-106-00	CERAMIC	100PF	10%	50V
C632	1-130-626-00	FILM	0.033MF	5%	50V
C633	1-123-356-00	ELECT	10MF	20%	25V
C651	1-123-354-00	ELECT	3.3MF	20%	50V
C652	1-102-106-00	CERAMIC	100PF	10%	50V
C653	1-102-106-00	CERAMIC	100PF	10%	50V
C654	1-102-106-00	CERAMIC	100PF	10%	50V
C655	1-123-611-00	ELECT	1MF	20%	50V
C656	1-123-607-00	ELECT	0.1MF	20%	50V
C657	1-123-610-00	ELECT	0.47MF	20%	50V
C658	1-130-629-00	FILM	0.056MF	5%	50V
C659	1-123-608-00	ELECT	0.22MF	20%	50V
C660	1-130-626-00	FILM	0.033MF	5%	50V
C661	1-123-607-00	ELECT	0.1MF	20%	50V
C663	1-130-622-00	FILM	0.015MF	5%	50V
C664	1-130-630-00	FILM	0.068MF	5%	50V
C665	1-108-575-00	MYLAR	0.0068MF	5%	50V
C666	1-130-626-00	FILM	0.033MF	5%	50V
C667	1-108-567-00	MYLAR	0.0033MF	5%	50V
C668	1-130-622-00	FILM	0.015MF	5%	50V
C669	1-108-561-00	MYLAR	0.0018MF	5%	50V
C670	1-108-577-00	MYLAR	0.0082MF	5%	50V
C671	1-102-117-00	CERAMIC	820PF	10%	50V
C672	1-108-569-00	MYLAR	0.0039MF	5%	50V
C673	1-102-113-00	CERAMIC	390PF	10%	50V
C674	1-123-354-00	ELECT	3.3MF	20%	50V
C675	1-123-354-00	ELECT	3.3MF	20%	50V
C676	1-102-106-00	CERAMIC	100PF	10%	50V
C677	1-102-106-00	CERAMIC	100PF	10%	50V
C679	1-123-356-00	ELECT	10MF	20%	25V
C681	1-102-106-00	CERAMIC	100PF	10%	50V
C682	1-130-626-00	FILM	0.033MF	5%	50V
C683	1-123-356-00	ELECT	10MF	20%	25V
C701	1-123-484-00	ELECT	100MF	20%	16V
C702	1-123-484-00	ELECT	100MF	20%	16V
C703	1-123-356-00	ELECT	10MF	20%	25V
C704	1-102-973-00	CERAMIC	100PF	5%	50V
C705	1-102-973-00	CERAMIC	100PF	5%	50V
C706	1-123-356-00	ELECT	10MF	20%	25V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C721	1-123-353-00	ELECT	2.2MF	20%	50V
C722	1-123-512-00	ELECT	47MF	20%	35V
C723	1-161-321-00	CERAMIC	680PF	10%	50V
C724	1-123-317-00	ELECT	22MF	20%	16V
C725	1-161-319-00	CERAMIC	470PF	10%	50V
C726	1-123-504-00	ELECT	100MF	20%	35V
C728	1-123-356-00	ELECT	10MF	20%	50V
C729	1-130-629-00	FILM	0.056MF	5%	50V
C730	1-123-504-00	ELECT	100MF	20%	35V
C753	1-123-356-00	ELECT	10MF	20%	25V
C754	1-102-973-00	CERAMIC	100PF	5%	50V
C755	1-102-973-00	CERAMIC	100PF	5%	50V
C756	1-123-356-00	ELECT	10MF	20%	25V
C771	1-123-353-00	ELECT	2.2MF	20%	50V
C772	1-123-512-00	ELECT	47MF	20%	35V
C773	1-161-321-00	CERAMIC	680PF	10%	50V
C774	1-123-317-00	ELECT	22MF	20%	16V
C775	1-161-319-00	CERAMIC	470PF	10%	50V
C778	1-123-356-00	ELECT	10MF	20%	50V
C779	1-130-629-00	FILM	0.056MF	5%	50V
C801	1-123-356-00	ELECT	10MF	20%	25V
C802	1-102-973-00	CERAMIC	100PF	5%	50V
C803	1-123-306-00	ELECT	47MF	20%	10V
C804	1-102-973-00	CERAMIC	100PF	5%	50V
C805	1-108-587-00	MYLAR	0.022MF	5%	50V
C806	1-108-575-00	MYLAR	0.0068MF	5%	50V
C807	1-123-485-00	ELECT	220MF	20%	16V
C808	1-123-380-00	ELECT	1MF	20%	50V
C811	1-123-356-00	ELECT	10MF	20%	25V
C812	1-102-973-00	CERAMIC	100PF	5%	50V
C813	1-123-306-00	ELECT	47MF	20%	10V
C814	1-102-973-00	CERAMIC	100PF	5%	50V
C815	1-108-587-00	MYLAR	0.022MF	5%	50V
C816	1-108-575-00	MYLAR	0.0068MF	5%	50V
C817	1-123-485-00	ELECT	220MF	20%	16V
C818	1-123-380-00	ELECT	1MF	20%	50V
C826	1-123-484-00	ELECT	100MF	20%	16V
C827	1-123-356-00	ELECT	10MF	20%	25V
C828	1-102-973-00	CERAMIC	100PF	5%	50V
C829	1-123-484-00	ELECT	100MF	20%	16V
C830	1-123-356-00	ELECT	10MF	20%	25V
C831	1-102-973-00	CERAMIC	100PF	5%	50V
C832	1-123-356-00	ELECT	10MF	20%	25V
C833	1-102-973-00	CERAMIC	100PF	5%	50V
C834	1-102-973-00	CERAMIC	100PF	5%	50V

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ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C835	1-123-356-00	ELECT	10MF	20%	25V
C836	1-123-475-00	ELECT	220MF	20%	10V
C837	1-123-493-00	ELECT	47MF	20%	16V
C838	1-108-591-00	MYLAR	0.033MF	5%	50V
C839	1-130-635-00	FILM	0.18MF	5%	50V
C840	1-108-585-00	MYLAR	0.018MF	5%	50V
C841	1-108-587-00	MYLAR	0.022MF	5%	50V
C842	1-108-585-00	MYLAR	0.018MF	5%	50V
C843	1-108-585-00	MYLAR	0.018MF	5%	50V
C844	1-123-380-00	ELECT	1MF	20%	50V
C845	1-123-380-00	ELECT	1MF	20%	50V
C846	1-123-380-00	ELECT	1MF	20%	50V
C847	1-123-608-00	ELECT	0.22MF	20%	50V
C848	1-123-380-00	ELECT	1MF	20%	50V
C849	1-130-632-00	FILM	0.1MF	5%	50V
C850	1-108-581-00	MYLAR	0.012MF	5%	50V
C851	1-108-581-00	MYLAR	0.012MF	5%	50V
C852	1-108-587-00	MYLAR	0.022MF	5%	50V
C853	1-108-581-00	MYLAR	0.012MF	5%	50V
C854	1-108-563-00	MYLAR	0.0022MF	5%	50V
C855	1-108-591-00	MYLAR	0.033MF	5%	50V
C856	1-123-356-00	ELECT	10MF	20%	25V
C857	1-102-980-00	CERAMIC	270PF	5%	50V
C858	1-102-980-00	CERAMIC	270PF	5%	50V
C859	1-123-608-00	ELECT	0.22MF	20%	50V
C860	1-102-074-00	CERAMIC	0.001MF	10%	50V
C861	1-123-484-00	ELECT	100MF	20%	16V
C862	1-123-484-00	ELECT	100MF	20%	16V
C863	1-123-356-00	ELECT	10MF	20%	25V
C864	1-123-356-00	ELECT	10MF	20%	25V
C865	1-102-973-00	CERAMIC	100PF	5%	50V
C866	1-102-973-00	CERAMIC	100PF	5%	50V
C867	1-123-477-00	ELECT	470MF	20%	10V
C868	1-130-632-00	FILM	0.1MF	5%	50V
C870	1-123-353-00	ELECT	2.2MF	20%	50V
C871	1-123-353-00	ELECT	2.2MF	20%	50V
C872	1-123-476-00	ELECT	330MF	20%	10V
C901	⚠.1-161-744-00	CERAMIC	0.01MF		400V
C902	⚠.1-123-318-00	ELECT	33MF	20%	16V
C903	⚠.1-123-493-00	ELECT	47MF	20%	16V
C904	⚠.1-123-485-00	ELECT	220MF	20%	16V
C905	⚠.1-123-118-00	ELECT(BLOCK)	3300MF		35V
C906	⚠.1-123-318-00	ELECT	33MF	20%	16V
C907	⚠.1-123-493-00	ELECT	47MF	20%	16V
C908	⚠.1-123-485-00	ELECT	220MF	20%	16V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C909	⚠.1-123-118-00	ELECT(BLOCK)	3300MF		35V
C910	⚠.1-123-356-00	ELECT	10MF	20%	25V
C911	⚠.1-101-004-00	CERAMIC	0.01MF		50V
C912	⚠.1-123-493-00	ELECT	47MF	20%	16V
C913	⚠.1-123-318-00	ELECT	33MF	20%	16V
C914	⚠.1-123-493-00	ELECT	47MF	20%	16V
C915	⚠.1-123-484-00	ELECT	100MF	20%	16V
C916	⚠.1-123-485-00	ELECT	220MF	20%	16V
C917	⚠.1-123-499-00	ELECT	2200MF	20%	25V
C999	1-123-356-00	ELECT	10MF	20%	25V
C1001	1-123-306-00	ELECT	47MF	20%	10V
C1002	1-123-380-00	ELECT	1MF	20%	50V
C1003	1-123-380-00	ELECT	1MF	20%	50V
C1004	1-130-488-00	MYLAR	0.027MF	5%	50V
C1005	1-130-488-00	MYLAR	0.027MF	5%	50V
C1007	1-101-005-00	CERAMIC	0.022MF		50V
C1008	1-101-005-00	CERAMIC	0.022MF		50V
C1009	1-123-380-00	ELECT	1MF	20%	50V
C1010	1-101-005-00	CERAMIC	0.022MF		50V
C1011	1-101-005-00	CERAMIC	0.022MF		50V
C1012	1-101-005-00	CERAMIC	0.022MF		50V
C1013	1-101-005-00	CERAMIC	0.022MF		50V
C1014	1-101-005-00	CERAMIC	0.022MF		50V
C1015	1-101-005-00	CERAMIC	0.022MF		50V
C1016	1-101-005-00	CERAMIC	0.022MF		50V
C1017	1-101-005-00	CERAMIC	0.022MF		50V
C1018	1-101-005-00	CERAMIC	0.022MF		50V
C1019	1-101-005-00	CERAMIC	0.022MF		50V
C1020	1-123-380-00	ELECT	1MF	20%	50V
C1021	1-123-380-00	ELECT	1MF	20%	50V
C1022	1-102-691-00	CERAMIC	33PF	5%	50V
C1023	1-101-005-00	CERAMIC	0.022MF		50V
C1024	1-123-474-00	ELECT	100MF	20%	10V
C1025	1-101-005-00	CERAMIC	0.022MF		50V
C1026	1-101-005-00	CERAMIC	0.022MF		50V
C1030	1-130-640-00	FILM	0.47MF	5%	50V
C1101	1-102-117-00	CERAMIC	820PF	10%	50V
C1102	1-101-880-00	CERAMIC	47PF	5%	50V
C1103	1-130-483-00	MYLAR	0.01MF	5%	50V
C1104	1-130-482-00	MYLAR	0.0082MF	5%	50V
C1105	1-130-632-00	FILM	0.1MF	5%	50V
C1106	1-130-483-00	MYLAR	0.01MF	5%	50V
C1107	1-130-627-00	MYLAR	0.039MF	5%	50V
C1108	1-130-492-00	MYLAR	0.056MF	5%	50V
C1109	1-130-485-00	MYLAR	0.015MF	5%	50V
C1110	1-130-481-00	MYLAR	0.0068MF	5%	50V

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The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C1111	1-123-369-00	ELECT	4.7MF	20%	50V
C1112	1-123-306-00	ELECT	47MF	20%	10V
C1113	1-123-369-00	ELECT	4.7MF	20%	50V
C1114	1-123-609-00	ELECT	0.33MF	20%	50V
C1115	1-123-356-00	ELECT	10MF	20%	25V
C1116	1-123-306-00	ELECT	47MF	20%	10V
C1117	1-123-369-00	ELECT	4.7MF	20%	50V
C1118	1-123-380-00	ELECT	1MF	20%	50V
C1119	1-123-306-00	ELECT	47MF	20%	10V
C1130	1-123-474-00	ELECT	100MF	20%	10V
C1131	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C1132	1-101-880-00	CERAMIC	47PF	5%	50V
C1133	1-130-492-00	MYLAR	0.056MF	5%	50V
C1201	1-102-117-00	CERAMIC	820PF	10%	50V
C1202	1-101-880-00	CERAMIC	47PF	5%	50V
C1203	1-130-483-00	MYLAR	0.01MF	5%	50V
C1204	1-130-482-00	MYLAR	0.0082MF	5%	50V
C1205	1-130-632-00	FILM	0.1MF	5%	50V
C1206	1-130-483-00	MYLAR	0.01MF	5%	50V
C1207	1-130-627-00	MYLAR	0.039MF	5%	50V
C1208	1-130-492-00	MYLAR	0.056MF	5%	50V
C1209	1-130-485-00	MYLAR	0.015MF	5%	50V
C1210	1-130-481-00	MYLAR	0.0068MF	5%	50V
C1211	1-123-369-00	ELECT	4.7MF	20%	50V
C1212	1-123-306-00	ELECT	47MF	20%	10V
C1213	1-123-369-00	ELECT	4.7MF	20%	50V
C1214	1-123-609-00	ELECT	0.33MF	20%	50V
C1215	1-123-356-00	ELECT	10MF	20%	25V
C1216	1-123-306-00	ELECT	47MF	20%	10V
C1217	1-123-369-00	ELECT	4.7MF	20%	50V
C1219	1-123-306-00	ELECT	47MF	20%	10V
C1301	1-108-571-00	MYLAR	0.0047MF	5%	50V
C1302	1-161-330-00	CERAMIC	0.01MF	30%	25V
C1303	1-161-330-00	CERAMIC	0.01MF	30%	25V
C1304	1-161-330-00	CERAMIC	0.01MF	30%	25V
C1305	1-161-330-00	CERAMIC	0.01MF	30%	25V
C1306	1-161-330-00	CERAMIC	0.01MF	30%	25V
C1307	1-161-330-00	CERAMIC	0.01MF	30%	25V
C1308	1-161-330-00	CERAMIC	0.01MF	30%	25V
C1309	1-123-380-00	ELECT	1MF	20%	50V
C1310	1-123-369-00	ELECT	4.7MF	20%	50V
C1311	1-123-354-00	ELECT	3.3MF	20%	50V
C1401	1-161-323-00	CERAMIC	0.001MF	10%	50V
C1402	1-123-380-00	ELECT	1MF	20%	50V
C1403	1-123-356-00	ELECT	10MF	20%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C1404	1-108-569-00	MYLAR	0.0039MF	5%	50V
C1405	1-102-119-00	CERAMIC	0.0015MF	10%	50V
C1406	1-123-609-00	ELECT	0.33MF	20%	50V
C1407	1-130-632-00	FILM	0.1MF	5%	50V
C1408	1-130-620-00	FILM	0.01MF	5%	50V
C1409	1-130-627-00	FILM	0.039MF	5%	50V
C1410	1-123-356-00	ELECT	10MF	20%	50V
C1411	1-123-493-00	ELECT	47MF	20%	25V
C1412	1-108-573-00	MYLAR	0.0056MF	5%	50V
C1413	1-123-356-00	ELECT	10MF	20%	50V
C1414	1-130-629-00	FILM	0.056MF	5%	50V
C1415	1-130-622-00	FILM	0.015MF	5%	50V
C1416	1-123-356-00	ELECT	10MF	20%	50V
C1417	1-108-557-00	MYLAR	0.0012MF	5%	50V
C1418	1-123-369-00	ELECT	4.7MF	20%	50V
C1419	1-130-620-00	FILM	0.01MF	5%	50V
C1420	1-130-621-00	FILM	0.012MF	5%	50V
C1421	1-130-621-00	FILM	0.012MF	5%	50V
C1422	1-130-624-00	FILM	0.022MF	5%	50V
C1423	1-130-621-00	FILM	0.012MF	5%	50V
C1424	1-123-380-00	ELECT	1MF	20%	50V
C1425	1-123-356-00	ELECT	10MF	20%	50V
C1426	1-102-944-00	CERAMIC	7PF	0.5PF	50V
C1427	1-101-884-00	CERAMIC	56PF	5%	50V
C1428	1-101-884-00	CERAMIC	56PF	5%	50V
C1429	1-130-623-00	FILM	0.018MF	5%	50V
C1430	1-123-353-00	ELECT	2.2MF	20%	50V
C1431	1-102-815-00	CERAMIC	110PF	5%	50V
C1432	1-101-890-00	CERAMIC	75PF	5%	50V
C1433	1-107-037-00	MICA	82PF	5%	500V
C1451	1-123-484-00	ELECT	100MF	20%	16V
C1452	1-123-484-00	ELECT	100MF	20%	16V
C1453	1-123-493-00	ELECT	47MF	20%	25V
C1454	1-123-330-00	ELECT	22MF	20%	25V
C1455	1-123-351-00	ELECT	0.47MF	20%	50V
C1456	1-106-345-00	MYLAR	0.0012MF	5%	200V
C1457	1-123-356-00	ELECT	10MF	20%	50V
C1458	1-123-369-00	ELECT	4.7MF	20%	50V
C1459	1-123-493-00	ELECT	47MF	20%	25V
C1460	1-123-493-00	ELECT	47MF	20%	25V
C1461	1-107-181-00	MICA	330PF	5%	500V
C1501	1-161-323-00	CERAMIC	0.001MF	10%	50V
C1502	1-123-380-00	ELECT	1MF	20%	50V
C1503	1-123-356-00	ELECT	10MF	20%	50V
C1504	1-108-569-00	MYLAR	0.0039MF	5%	50V

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MF:μF, PF:μμF.

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- All resistors are in ohms.
- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C1505	1-102-119-00	CERAMIC	0.0015MF	10%	50V
C1506	1-123-609-00	ELECT	0.33MF	20%	50V
C1507	1-130-632-00	FILM	0.1MF	5%	50V
C1508	1-130-620-00	FILM	0.01MF	5%	50V
C1509	1-130-627-00	FILM	0.039MF	5%	50V
C1510	1-123-356-00	ELECT	10MF	20%	50V
C1512	1-108-573-00	MYLAR	0.0056MF	5%	50V
C1513	1-123-356-00	ELECT	10MF	20%	50V
C1514	1-130-629-00	FILM	0.056MF	5%	50V
C1515	1-130-622-00	FILM	0.015MF	5%	50V
C1516	1-123-356-00	ELECT	10MF	20%	50V
C1517	1-108-557-00	MYLAR	0.0012MF	5%	50V
C1518	1-123-369-00	ELECT	4.7MF	20%	50V
C1519	1-130-620-00	FILM	0.01MF	5%	50V
C1520	1-130-621-00	FILM	0.012MF	5%	50V
~~C1521~~	~~1-130-621-00~~	~~FILM~~	~~0.012MF~~	~~5%~~	~~50V~~
C1522	1-130-624-00	FILM	0.022MF	5%	50V
C1523	1-130-621-00	FILM	0.012MF	5%	50V
C1524	1-123-380-00	ELECT	1MF	20%	50V
C1525	1-123-356-00	ELECT	10MF	20%	50V
C1526	1-102-944-00	CERAMIC	7PF	0.5PF	50V
C1527	1-101-884-00	CERAMIC	56PF	5%	50V
C1528	1-101-884-00	CERAMIC	56PF	5%	50V
C1529	1-130-623-00	FILM	0.018MF	5%	50V
C1530	1-123-353-00	ELECT	2.2MF	20%	50V
C1531	1-102-815-00	CERAMIC	110PF	5%	50V
C1532	1-101-890-00	CERAMIC	75PF	5%	50V
C1533	1-107-037-00	MICA	82PF	5%	500V
CF001	1-527-964-00	FILTER, CERAMIC			
CF002	1-527-964-00	FILTER, CERAMIC			
CFU001	1-404-251-00	TRANSFORMER, IF			
♠CNJ201;	1-560-602-00	PIN, CONNECTOR 3P			
♠CNJ301;	1-564-111-00	PIN, CONNECTOR 2P			
♠CNJ401;	1-564-111-00	PIN, CONNECTOR 2P			
♠CNJ701;	1-564-116-00	PIN, CONNECTOR 7P			
♠CNJ702;	1-560-062-00	PIN, CONNECTOR 4P			
♠CNJ703;	1-560-061-00	PIN, CONNECTOR 3P			
♠CNJ801;	1-560-605-00	PIN, CONNECTOR 6P			
♠CNJ802;	1-560-603-00	PIN, CONNECTOR 4P			
♠CNJ803;	1-560-605-00	PIN, CONNECTOR 6P			
♠CNJ804;	1-560-602-00	PIN, CONNECTOR 3P			
♠CNJ805;	1-560-604-00	PIN, CONNECTOR 5P			
♠CNJ806;	1-560-605-00	PIN, CONNECTOR 6P			
♠CNJ807;	1-560-605-00	PIN, CONNECTOR 6P			
♠CNJ808;	1-560-602-00	PIN, CONNECTOR 3P			
♠CNJ809;	1-560-604-00	PIN, CONNECTOR 5P			

ELECTRICAL PARTS

Ref.No.	Part No.	Description		
♠CNJ810 ;	1-560-602-00	PIN, CONNECTOR 3P		
♠CNJ812 ;	1-560-607-00	PIN, CONNECTOR 10P		
♠CNJ813 ;	1-560-711-00	PIN, CONNECTOR 12P		
♠CNJ815 ;	1-564-116-00	PIN, CONNECTOR 7P		
♠CNJ816 ;	1-560-338-00	PIN, CONNECTOR 7P		
♠CNJ817 ;	1-560-338-00	PIN, CONNECTOR 7P		
♠CNJ820 ;	1-560-605-31	PIN, CONNECTOR 6P		
CNJ1051	1-561-965-00	SOCKET 5P		
♠CNJ1301;	1-564-117-11	PIN, CONNECTOR 8P		
♠CNJ1302;	1-564-112-21	PIN, CONNECTOR 3P		
♠CNJ1303;	1-564-113-11	PIN, CONNECTOR 4P		
♠CNJ1304;	1-564-113-11	PIN, CONNECTOR 4P		
♠CNJ1305;	1-564-116-00	PIN, CONNECTOR 7P		
♠CNJ1306;	1-564-113-11	PIN, CONNECTOR 4P		
♠CNP001 ;	1-564-113-11	PIN, CONNECTOR 4P		
~~♠CNP818 ;~~	~~1-560-606-00~~	~~PIN, CONNECTOR 7P~~		
♠CNP819 ;	1-560-606-00	PIN, CONNECTOR 7P		
♠CNP1001;	1-564-112-21	PIN, CONNECTOR 3P		
♠CNP1002;	1-564-112-21	PIN, CONNECTOR 3P		
♠CNP1003;	1-560-710-00	PIN, CONNECTOR 9P		
♠CNP1004;	1-560-603-00	PIN, CONNECTOR 4P		
♠CNP1005;	1-560-605-00	PIN, CONNECTOR 6P		
♠CNP1006;	1-560-602-00	PIN, CONNECTOR 3P		
♠CNP1007;	1-564-113-11	PIN, CONNECTOR 4P		
♠CNP1008;	1-564-119-11	PIN, CONNECTOR 10P		
CP901 ⚠.	1-102-394-00	CERAMIC	(0.01+0.01)MF	250V
CP902 ⚠.	1-102-394-00	CERAMIC	(0.01+0.01)MF	250V
CP903 ⚠.	1-102-394-00	CERAMIC	(0.01+0.01)MF	250V
CP904 ⚠.	1-102-394-00	CERAMIC	(0.01+0.01)MF	250V
CT001	1-151-385-00	CAP, TUNING, POLYETHYLENE		
CT002	1-151-385-00	CAP, TUNING, POLYETHYLENE		
CT003	1-141-138-XX	CAP, TRIMMER 8PF		
CT004	1-141-138-XX	CAP, TRIMMER 8PF		
CT005	1-141-138-XX	CAP, TRIMMER 8PF		
CT006	1-141-138-XX	CAP, TRIMMER 8PF		
CV001	1-151-385-00	CAP, TUNING, POLYETHYLENE		
CV002	1-151-385-00	CAP, TUNING, POLYETHYLENE		
CV003	1-151-385-00	CAP, TUNING, POLYETHYLENE		
CV004	1-151-385-00	CAP, TUNING, POLYETHYLENE		
D001	8-719-815-55	DIODE 1S1555		
D002	8-719-903-49	DIODE SLH-54PC3		
D003	8-719-907-78	DIODE PR5534S		
D004	8-719-815-55	DIODE 1S1555		
D521	8-719-815-55	DIODE 1S1555		
D522	8-719-815-55	DIODE 1S1555		

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ELECTRICAL PARTS

Ref.No.	Part No.	Description
D571	8-719-815-55	DIODE 1S1555
D572	8-719-815-55	DIODE 1S1555
D801	8-719-815-55	DIODE 1S1555
D802	8-719-815-55	DIODE 1S1555
D803	8-719-910-24	DIODE HZ12B1L
D804	8-719-815-55	DIODE 1S1555
D805	8-719-815-55	DIODE 1S1555
D901	⚠.8-719-910-24	DIODE HZ12B1L
D902	⚠.8-719-502-20	DIODE S2VB20
D903	⚠.8-719-200-02	DIODE 10E-2
D904	⚠.8-719-910-24	DIODE HZ12B1L
D905	⚠.8-719-510-01	DIODE SIRBA10
D1001	8-719-910-13	DIODE HZ11A3L
D1002	8-719-815-55	DIODE 1S1555
D1003	8-719-815-55	DIODE 1S1555
D1004	8-719-907-78	DIODE PR5534S
D1005	8-719-907-78	DIODE PR5534S
D1006	8-719-907-78	DIODE PR5534S
D1007	8-719-903-49	DIODE SLH-54PC3
D1008	8-719-903-49	DIODE SLH-54PC3
D1009	8-719-815-55	DIODE 1S1555
D1010	8-719-200-02	DIODE 10E-2
D1011	8-719-200-02	DIODE 10E-2
D1012	8-719-903-49	DIODE SLH-54PC3
D1013	8-719-903-49	DIODE SLH-54PC3
D1014	8-719-815-55	DIODE 1S1555
D1015	8-719-815-55	DIODE 1S1555
D1090	8-719-903-49	DIODE SLH-54PC3
D1091	8-719-904-07	DIODE SLH-54DC3
D1095	8-719-902-03	PHOTO INTERRUPTOR SPI201-A
D1101	8-719-815-55	DIODE 1S1555
D1201	8-719-815-55	DIODE 1S1555
D1301	8-719-815-55	DIODE 1S1555
D1302	8-719-815-55	DIODE 1S1555
D1303	8-719-815-55	DIODE 1S1555
D1304	8-719-902-03	PHOTO INTERRUPTOR SPI201-A
D1305	8-719-815-55	DIODE 1S1555
D1306	8-719-200-02	DIODE 10E-2
D1307	8-719-200-02	DIODE 10E-2
D1308	8-719-815-55	DIODE 1S1555
D1309	8-719-815-55	DIODE 1S1555
D1310	8-719-815-55	DIODE 1S1555
D1311	8-719-907-78	DIODE PR5534S
D1312	8-719-904-07	DIODE SLH-54DC3
D1313	8-719-903-49	DIODE SLH-54PC3
D1401	8-719-815-55	DIODE 1S1555
D1402	8-719-200-02	DIODE 10E-2

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D1403	8-719-815-55	DIODE 1S1555
D1404	8-719-815-55	DIODE 1S1555
D1405	8-719-815-55	DIODE 1S1555
D1406	8-719-903-49	DIODE SLH-54PC3
D1407	8-719-903-49	DIODE SLH-54PC3
D1408	8-719-903-49	DIODE SLH-54PC3
D1409	8-719-815-55	DIODE 1S1555
D1410	8-719-815-55	DIODE 1S1555
D1501	8-719-815-55	DIODE 1S1555
F901	⚠.1-532-259-00	(AEP)....FUSE, TIME-LAG 1.6A
F902	⚠.1-532-215-00	FUSE, TIME-LAG 0.8A
F903	⚠.1-532-078-00	FUSE, TIME-LAG 1.0A
HE	8-825-724-00	GUIDE, TAPE/HEAD, ERASE
HRP	8-829-373-30	HEAD, REC/PB (PP181-3602C)
IC001	8-751-680-02	IC CX-168-2
IC002	8-759-833-90	IC LA3390
IC101	8-759-145-58	IC UPC4558C
IC201	8-759-145-58	IC UPC4558C
IC301	8-759-145-58	IC UPC4558C
IC401	8-759-145-58	IC UPC4558C
IC521	8-759-145-58	IC UPC4558C
IC601	8-759-145-58	IC UPC4558C
IC602	8-759-145-58	IC UPC4558C
IC701	8-759-145-57	IC UPC4557C
IC702	⚠.8-749-942-72	IC STK-4272
IC801	8-759-705-58	IC NJM4558D-D
IC802	8-759-990-82	IC TL082CP
IC803	8-759-679-32	IC CX-7932
IC804	8-759-800-37	IC LC4066BH
IC805	8-759-800-37	IC LC4066BH
IC1001	8-759-700-46	IC CX10034
IC1002	8-759-101-17	IC UPD7508C-032
IC1003	8-759-240-49	IC TC4049BP
IC1101	8-759-273-25	IC TA7325P
IC1111	8-759-905-57	IC CX-174-2
IC1211	8-759-905-57	IC CX-174-2
IC1301	8-759-200-63	IC TC9310N-001
IC1401	8-759-905-57	IC CX-174-2
IC1501	8-759-905-57	IC CX-174-2
J501	1-507-857-00	JACK, LARGE TYPE
J502	1-507-857-00	JACK, LARGE TYPE
J503	1-507-857-00	JACK, LARGE TYPE
J553	1-507-857-00	JACK, LARGE TYPE
J701	1-507-855-00	JACK, LARGE TYPE
J702	1-507-856-00	JACK, LARGE TYPE

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ELECTRICAL PARTS

Ref.No.	Part No.	Description
L001 ♠;	1-420-884-00	COIL, AIR CORE
L002	1-405-995-00	COIL, FM OSC (W)
L003 ♠;	1-420-840-00	COIL
L004	1-402-037-00	COIL (ANT)
L005	1-405-999-00	COIL, OSC
L006	1-404-327-00	TRANSFORMER, DISCRIMINATOR
L007	1-402-038-00	COIL (ANT)
L008	1-406-011-00	COIL, OSC (LW)
L009	1-407-963-00	MICRO INDUCTOR 15MMH
L010	1-407-963-00	MICRO INDUCTOR 15MMH
L801	1-407-174-XX	MICRO INDUCTOR 270UH
L999	1-407-174-XX	MICRO INDUCTOR 270UH
L1001	1-407-174-XX	MICRO INDUCTOR 270UH
L1002	1-407-701-00	MICRO INDUCTOR 47UH
L1101	1-407-178-XX	MICRO INDUCTOR 1.0UH
L1102	1-407-178-XX	MICRO INDUCTOR 1.0UH
L1451	1-408-262-00	MICRO INDUCTOR 27MMH
L1551	1-408-262-00	MICRO INDUCTOR 27MMH
LC001	1-235-046-00	ENCAPSULATED COMPONENT (B.E.F)
PL001	1-518-526-00	LAMP, PILOT
PL801	1-518-527-51	LAMP, PILOT
PL802	1-518-527-51	LAMP, PILOT
PL803	1-518-527-51	LAMP, PILOT
PL804	1-518-527-51	LAMP, PILOT
PL805	1-518-527-51	LAMP, PILOT
PL806	1-518-527-51	LAMP, PILOT
PL807	1-518-527-51	LAMP, PILOT
Q001	8-729-671-14	TRANSISTOR 2SC710-14
Q002	8-729-671-14	TRANSISTOR 2SC710-14
Q003	8-729-671-14	TRANSISTOR 2SC710-14
Q004	8-729-671-14	TRANSISTOR 2SC710-14
Q005	8-729-671-13	TRANSISTOR 2SC710-13
Q006	8-769-200-40	TRANSISTOR 2SK107-4
Q007	8-729-245-83	TRANSISTOR 2SC2458
Q008	8-729-245-83	TRANSISTOR 2SC2458
Q009	8-729-245-83	TRANSISTOR 2SC2458
Q101	8-729-205-84	TRANSISTOR 2SC2458L-BL
Q151	8-729-205-84	TRANSISTOR 2SC2458L-BL
Q201	8-729-205-84	TRANSISTOR 2SC2458L-BL
Q202	8-729-205-84	TRANSISTOR 2SC2458L-BL
Q251	8-729-205-84	TRANSISTOR 2SC2458L-BL
Q252	8-729-205-84	TRANSISTOR 2SC2458L-BL
Q301	8-729-205-84	TRANSISTOR 2SC2458L-BL
Q401	8-729-205-84	TRANSISTOR 2SC2458L-BL
Q521	8-729-245-83	TRANSISTOR 2SC2458
Q522	8-729-245-83	TRANSISTOR 2SC2458
Q523	8-729-245-83	TRANSISTOR 2SC2458
Q571	8-729-245-83	TRANSISTOR 2SC2458

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q572	8-729-245-83	TRANSISTOR 2SC2458
Q573	8-729-245-83	TRANSISTOR 2SC2458
Q601	8-729-245-83	TRANSISTOR 2SC2458
Q602	8-729-245-83	TRANSISTOR 2SC2458
Q603	8-729-245-83	TRANSISTOR 2SC2458
Q604	8-729-245-83	TRANSISTOR 2SC2458
Q605	8-729-245-83	TRANSISTOR 2SC2458
Q606	8-729-245-83	TRANSISTOR 2SC2458
Q607	8-729-245-83	TRANSISTOR 2SC2458
Q608	8-729-245-83	TRANSISTOR 2SC2458
Q609	8-729-245-83	TRANSISTOR 2SC2458
Q651	8-729-245-83	TRANSISTOR 2SC2458
Q652	8-729-245-83	TRANSISTOR 2SC2458
Q653	8-729-245-83	TRANSISTOR 2SC2458
Q654	8-729-245-83	TRANSISTOR 2SC2458
Q655	8-729-245-83	TRANSISTOR 2SC2458
Q656	8-729-245-83	TRANSISTOR 2SC2458
Q657	8-729-245-83	TRANSISTOR 2SC2458
Q658	8-729-245-83	TRANSISTOR 2SC2458
Q659	8-729-245-83	TRANSISTOR 2SC2458
Q801	8-729-245-83	TRANSISTOR 2SC2458
Q802	8-729-245-83	TRANSISTOR 2SC2458
Q803	8-729-245-83	TRANSISTOR 2SC2458
Q804	8-729-245-83	TRANSISTOR 2SC2458
Q805	8-729-245-83	TRANSISTOR 2SC2458
Q806	8-729-245-83	TRANSISTOR 2SC2458
Q807	8-729-245-83	TRANSISTOR 2SC2458
Q808	8-729-117-54	TRANSISTOR 2SA1175
Q809	8-729-117-54	TRANSISTOR 2SA1175
Q810	8-729-245-83	TRANSISTOR 2SC2458
Q812	8-729-117-54	TRANSISTOR 2SA1175
Q813	8-729-245-83	TRANSISTOR 2SC2458
Q814	8-729-245-83	TRANSISTOR 2SC2458
Q815	8-729-245-83	TRANSISTOR 2SC2458
Q816	8-729-117-54	TRANSISTOR 2SA1175
Q817	8-729-245-83	TRANSISTOR 2SC2458
Q818	8-729-245-83	TRANSISTOR 2SC2458
Q819	8-729-177-43	TRANSISTOR 2SD774
Q820	8-729-177-43	TRANSISTOR 2SD774
Q821	8-729-245-83	TRANSISTOR 2SC2458
Q822	8-729-245-83	TRANSISTOR 2SC2458
Q901 ⚠	8-729-201-78	TRANSISTOR 2SD1406
Q902 ⚠	8-729-201-78	TRANSISTOR 2SD1406
Q903 ⚠	8-729-201-78	TRANSISTOR 2SD1406
Q904 ⚠	8-729-201-78	TRANSISTOR 2SD1406

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Q905	⚠.8-729-245-83	TRANSISTOR 2SC2458
Q906	⚠.8-729-117-54	TRANSISTOR 2SA1175
Q907	⚠.8-729-245-83	TRANSISTOR 2SC2458
Q908	⚠.8-729-117-54	TRANSISTOR 2SA1175
Q1001	8-729-245-83	TRANSISTOR 2SC2458
Q1002	8-729-117-54	TRANSISTOR 2SA1175
Q1003	8-729-117-54	TRANSISTOR 2SA1175
Q1004	8-729-245-83	TRANSISTOR 2SC2458
Q1005	8-729-245-83	TRANSISTOR 2SC2458
Q1006	8-729-245-83	TRANSISTOR 2SC2458
Q1007	8-729-245-83	TRANSISTOR 2SC2458
Q1008	8-729-245-83	TRANSISTOR 2SC2458
Q1009	8-729-117-54	TRANSISTOR 2SA1175
Q1010	8-729-245-83	TRANSISTOR 2SC2458
Q1011	8-729-245-83	TRANSISTOR 2SC2458
Q1012	8-729-245-83	TRANSISTOR 2SC2458
Q1101	8-729-245-83	TRANSISTOR 2SC2458
Q1102	8-729-245-83	TRANSISTOR 2SC2458
Q1201	8-729-245-83	TRANSISTOR 2SC2458
Q1202	8-729-245-83	TRANSISTOR 2SC2458
Q1301	8-729-117-54	TRANSISTOR 2SA1175
Q1302	8-729-245-83	TRANSISTOR 2SC2458
Q1303	8-729-117-54	TRANSISTOR 2SA1175
Q1304	8-729-245-83	TRANSISTOR 2SC2458
Q1305	8-729-245-83	TRANSISTOR 2SC2458
Q1306	8-729-117-54	TRANSISTOR 2SA1175
Q1401	8-729-205-84	TRANSISTOR 2SC2458L-BL
Q1402	8-729-245-83	TRANSISTOR 2SC2458
Q1403	8-729-245-83	TRANSISTOR 2SC2458
Q1404	8-729-245-83	TRANSISTOR 2SC2458
Q1405	8-729-245-83	TRANSISTOR 2SC2458
Q1406	8-729-245-83	TRANSISTOR 2SC2458
Q1407	8-729-245-83	TRANSISTOR 2SC2458
Q1408	8-729-245-83	TRANSISTOR 2SC2458
Q1409	8-729-117-54	TRANSISTOR 2SA1175
Q1410	8-729-177-43	TRANSISTOR 2SD774
Q1411	8-729-117-54	TRANSISTOR 2SA1175
Q1412	8-729-245-83	TRANSISTOR 2SC2458
Q1501	8-729-205-84	TRANSISTOR 2SC2458L-BL
Q1502	8-729-245-83	TRANSISTOR 2SC2458
Q1503	8-729-245-83	TRANSISTOR 2SC2458
Q1504	8-729-245-83	TRANSISTOR 2SC2458
Q1505	8-729-245-83	TRANSISTOR 2SC2458
Q1506	8-729-245-83	TRANSISTOR 2SC2458
Q1507	8-729-245-83	TRANSISTOR 2SC2458

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R001	1-247-895-00	CARBON	470K	5%	1/6W	
R002	1-247-799-00	CARBON	47	5%	1/6W	
R003	1-247-849-00	CARBON	5.6K	5%	1/6W	
R004	1-247-815-00	CARBON	220	5%	1/6W	
R005	1-247-897-00	CARBON	560K	5%	1/6W	
R006	1-247-853-00	CARBON	8.2K	5%	1/6W	
R007	1-247-119-00	CARBON	330	5%	1/4W	
R008	1-247-819-00	CARBON	330	5%	1/6W	
R009	1-247-879-00	CARBON	100K	5%	1/6W	
R010	1-247-799-00	CARBON	47	5%	1/6W	
R011	1-247-819-00	CARBON	330	5%	1/6W	
R012	1-247-885-00	CARBON	180K	5%	1/6W	
R013	1-247-879-00	CARBON	100K	5%	1/6W	
R014	1-247-891-00	CARBON	330K	5%	1/6W	
R015	1-247-847-00	CARBON	4.7K	5%	1/6W	
R016	1-247-153-00	CARBON	8.2K	5%	1/4W	
R017	1-247-819-00	CARBON	330	5%	1/6W	
R018	1-247-815-00	CARBON	220	5%	1/6W	
R019	1-247-855-00	CARBON	10K	5%	1/6W	
R020	1-247-147-00	CARBON	4.7K	5%	1/4W	
R021	1-247-819-00	CARBON	330	5%	1/6W	
R023	1-247-849-00	CARBON	5.6K	5%	1/6W	
R024	1-247-879-00	CARBON	100K	5%	1/6W	
R025	1-247-837-00	CARBON	1.8K	5%	1/6W	
R026	1-247-835-00	CARBON	1.5K	5%	1/6W	
R027	1-247-853-00	CARBON	8.2K	5%	1/6W	
R028	1-247-849-00	CARBON	5.6K	5%	1/6W	
R029	1-247-839-00	CARBON	2.2K	5%	1/6W	
R030	1-247-847-00	CARBON	4.7K	5%	1/6W	
R031	1-247-847-00	CARBON	4.7K	5%	1/6W	
R032	⚠.1-212-869-00	FUSIBLE	33	5%	1/4W	F
R033	⚠.1-212-869-00	FUSIBLE	33	5%	1/4W	F
R034	1-247-839-00	CARBON	2.2K	5%	1/6W	
R035	⚠.1-212-857-00	FUSIBLE	10	5%	1/4W	F
R036	1-247-859-00	CARBON	15K	5%	1/6W	
R037	1-247-879-00	CARBON	100K	5%	1/6W	
R038	1-247-873-00	CARBON	56K	5%	1/6W	
R039	1-247-873-00	CARBON	56K	5%	1/6W	
R040	1-247-867-00	CARBON	33K	5%	1/6W	
R041	1-247-873-00	CARBON	56K	5%	1/6W	
R042	1-247-831-00	CARBON	1K	5%	1/6W	
R043	1-247-867-00	CARBON	33K	5%	1/6W	
R044	1-247-847-00	CARBON	4.7K	5%	1/6W	
R045	1-247-873-00	CARBON	56K	5%	1/6W	
R046	1-247-871-00	CARBON	47K	5%	1/6W	

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COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R047	1-247-855-00	CARBON	10K	5%	1/6W
R048	1-247-855-00	CARBON	10K	5%	1/6W
R049	1-247-831-00	CARBON	1K	5%	1/6W
R050	1-247-131-00	CARBON	1K	5%	1/4W
R051	1-247-887-00	CARBON	220K	5%	1/6W
R052	1-247-877-00	CARBON	82K	5%	1/6W
R053	1-247-877-00	CARBON	82K	5%	1/6W
R054	1-247-831-00	CARBON	1K	5%	1/6W
R055	1-247-831-00	CARBON	1K	5%	1/6W
R056	1-247-783-00	CARBON	10	5%	1/6W
R057	1-247-783-00	CARBON	10	5%	1/6W
R058	1-247-863-00	CARBON	22K	5%	1/6W
R059	1-247-863-00	CARBON	22K	5%	1/6W
R060	1-247-841-00	CARBON	2.7K	5%	1/6W
R061	1-247-841-00	CARBON	2.7K	5%	1/6W
R062	1-247-825-00	CARBON	560	5%	1/6W
R065	1-247-831-00	CARBON	1K	5%	1/6W
R103	1-247-147-00	CARBON	4.7K	5%	1/4W
R104	1-247-163-00	CARBON	22K	5%	1/4W
R105	1-247-163-00	CARBON	22K	5%	1/4W
R106	1-247-175-00	CARBON	68K	5%	1/4W
R107	1-247-175-00	CARBON	68K	5%	1/4W
R108	1-247-119-00	CARBON	330	5%	1/4W
R109	1-247-171-00	CARBON	47K	5%	1/4W
R110	1-247-163-00	CARBON	22K	5%	1/4W
R120	1-246-545-00	CARBON	1M	5%	1/4W
R121	1-247-147-00	CARBON	4.7K	5%	1/4W
R122	1-247-139-00	CARBON	2.2K	5%	1/4W
R123	1-247-119-00	CARBON	330	5%	1/4W
R124	1-247-179-00	CARBON	100K	5%	1/4W
R153	1-247-147-00	CARBON	4.7K	5%	1/4W
R154	1-247-163-00	CARBON	22K	5%	1/4W
R155	1-247-163-00	CARBON	22K	5%	1/4W
R156	1-247-175-00	CARBON	68K	5%	1/4W
R157	1-247-175-00	CARBON	68K	5%	1/4W
R158	1-247-119-00	CARBON	330	5%	1/4W
R159	1-246-513-00	CARBON	47K	5%	1/4W
R160	1-246-505-00	CARBON	22K	5%	1/4W
R170	1-246-545-00	CARBON	1M	5%	1/4W
R171	1-246-489-00	CARBON	4.7K	5%	1/4W
R173	1-246-461-00	CARBON	330	5%	1/4W
R174	1-246-521-00	CARBON	100K	5%	1/4W
R203	1-246-489-00	CARBON	4.7K	5%	1/4W
R204	1-247-863-00	CARBON	22K	5%	1/6W
R205	1-246-505-00	CARBON	22K	5%	1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R206	1-246-517-00	CARBON	68K	5%	1/4W
R207	1-247-875-00	CARBON	68K	5%	1/6W
R208	1-246-461-00	CARBON	330	5%	1/4W
R209	1-246-513-00	CARBON	47K	5%	1/4W
R210	1-246-505-00	CARBON	22K	5%	1/4W
R220	1-246-545-00	CARBON	1M	5%	1/4W
R221	1-246-489-00	CARBON	4.7K	5%	1/4W
R222	1-246-481-00	CARBON	2.2K	5%	1/4W
R223	1-246-461-00	CARBON	330	5%	1/4W
R224	1-246-521-00	CARBON	100K	5%	1/4W
R231	1-247-855-00	CARBON	10K	5%	1/6W
R232	1-247-819-00	CARBON	330	5%	1/6W
R233	1-247-903-00	CARBON	1M	5%	1/6W
R234	1-247-805-00	CARBON	82	5%	1/6W
R235	1-247-847-00	CARBON	4.7K	5%	1/6W
R236	1-247-879-00	CARBON	100K	5%	1/6W
R237	1-247-839-00	CARBON	2.2K	5%	1/6W
R253	1-246-489-00	CARBON	4.7K	5%	1/4W
R254	1-247-863-00	CARBON	22K	5%	1/6W
R255	1-246-505-00	CARBON	22K	5%	1/4W
R256	1-246-517-00	CARBON	68K	5%	1/4W
R257	1-247-875-00	CARBON	68K	5%	1/6W
R258	1-246-461-00	CARBON	330	5%	1/4W
R259	1-246-513-00	CARBON	47K	5%	1/4W
R260	1-247-863-00	CARBON	22K	5%	1/6W
R270	1-246-545-00	CARBON	1M	5%	1/4W
R271	1-246-489-00	CARBON	4.7K	5%	1/4W
R273	1-246-461-00	CARBON	330	5%	1/4W
R274	1-246-521-00	CARBON	100K	5%	1/4W
R281	1-247-855-00	CARBON	10K	5%	1/6W
R282	1-247-819-00	CARBON	330	5%	1/6W
R283	1-247-903-00	CARBON	1M	5%	1/6W
R284	1-247-805-00	CARBON	82	5%	1/6W
R285	1-247-847-00	CARBON	4.7K	5%	1/6W
R286	1-247-879-00	CARBON	100K	5%	1/6W
R301	1-246-529-00	CARBON	220K	5%	1/4W
R302	1-246-461-00	CARBON	330	5%	1/4W
R303	1-246-513-00	CARBON	47K	5%	1/4W
R304	1-246-521-00	CARBON	100K	5%	1/4W
R305	1-246-497-00	CARBON	10K	5%	1/4W
R306	1-246-483-00	CARBON	2.7K	5%	1/4W
R307	1-246-455-00	CARBON	180	5%	1/4W
R308	1-246-529-00	CARBON	220K	5%	1/4W
R309	1-246-521-00	CARBON	100K	5%	1/4W
R310	1-246-499-00	CARBON	12K	5%	1/4W

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MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R311	1-246-497-00	CARBON	10K	5%	1/4W
R313	1-246-505-00	CARBON	22K	5%	1/4W
R314	1-246-529-00	CARBON	220K	5%	1/4W
R315	1-246-481-00	CARBON	2.2K	5%	1/4W
R316	1-246-481-00	CARBON	2.2K	5%	1/4W
R317	1-246-497-00	CARBON	10K	5%	1/4W
R318	1-246-481-00	CARBON	2.2K	5%	1/4W
R319	1-246-533-00	CARBON	330K	5%	1/4W
R320	1-246-497-00	CARBON	10K	5%	1/4W
R321	1-246-481-00	CARBON	2.2K	5%	1/4W
R322	1-246-497-00	CARBON	10K	5%	1/4W
R323	1-246-497-00	CARBON	10K	5%	1/4W
R324	1-246-497-00	CARBON	10K	5%	1/4W
R325	1-246-497-00	CARBON	10K	5%	1/4W
R326	1-246-497-00	CARBON	10K	5%	1/4W
~~R327~~	~~1-246-461-00~~	~~CARBON~~	~~330~~	~~5%~~	~~1/4W~~
R328	1-246-461-00	CARBON	330	5%	1/4W
R329	1-246-513-00	CARBON	47K	5%	1/4W
R401	1-246-529-00	CARBON	220K	5%	1/4W
R402	1-246-461-00	CARBON	330	5%	1/4W
R403	1-246-513-00	CARBON	47K	5%	1/4W
R404	1-246-521-00	CARBON	100K	5%	1/4W
R405	1-246-497-00	CARBON	10K	5%	1/4W
R406	1-246-483-00	CARBON	2.7K	5%	1/4W
R407	1-246-455-00	CARBON	180	5%	1/4W
R408	1-246-529-00	CARBON	220K	5%	1/4W
R409	1-246-521-00	CARBON	100K	5%	1/4W
R410	1-246-499-00	CARBON	12K	5%	1/4W
R411	1-246-497-00	CARBON	10K	5%	1/4W
R413	1-246-505-00	CARBON	22K	5%	1/4W
R414	1-246-529-00	CARBON	220K	5%	1/4W
R415	1-246-481-00	CARBON	2.2K	5%	1/4W
R416	1-246-481-00	CARBON	2.2K	5%	1/4W
R417	1-246-497-00	CARBON	10K	5%	1/4W
R418	1-246-481-00	CARBON	2.2K	5%	1/4W
R419	1-246-533-00	CARBON	330K	5%	1/4W
R420	1-246-497-00	CARBON	10K	5%	1/4W
R421	1-246-481-00	CARBON	2.2K	5%	1/4W
R422	1-246-497-00	CARBON	10K	5%	1/4W
R423	1-246-497-00	CARBON	10K	5%	1/4W
R424	1-246-497-00	CARBON	10K	5%	1/4W
R425	1-246-497-00	CARBON	10K	5%	1/4W
R426	1-246-497-00	CARBON	10K	5%	1/4W
R427	1-246-461-00	CARBON	330	5%	1/4W
R428	1-246-461-00	CARBON	330	5%	1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R429	1-246-513-00	CARBON	47K	5%	1/4W
R521	1-246-457-00	CARBON	220	5%	1/4W
R522	1-246-487-00	CARBON	3.9K	5%	1/4W
R523	1-246-521-00	CARBON	100K	5%	1/4W
R524	1-246-485-00	CARBON	3.3K	5%	1/4W
R526	1-246-497-00	CARBON	10K	5%	1/4W
R527	1-246-513-00	CARBON	47K	5%	1/4W
R528	1-246-513-00	CARBON	47K	5%	1/4W
R529	1-246-497-00	CARBON	10K	5%	1/4W
R530	1-246-497-00	CARBON	10K	5%	1/4W
R531	1-246-497-00	CARBON	10K	5%	1/4W
R549	1-246-537-00	CARBON	470K	5%	1/4W
R571	1-246-473-00	CARBON	1K	5%	1/4W
R572	1-246-505-00	CARBON	22K	5%	1/4W
R573	1-246-521-00	CARBON	100K	5%	1/4W
~~R574~~	~~1-246-485-00~~	~~CARBON~~	~~3.3K~~	~~5%~~	~~1/4W~~
R576	1-246-497-00	CARBON	10K	5%	1/4W
R577	1-246-513-00	CARBON	47K	5%	1/4W
R578	1-246-513-00	CARBON	47K	5%	1/4W
R579	1-246-497-00	CARBON	10K	5%	1/4W
R580	1-246-497-00	CARBON	10K	5%	1/4W
R599	1-246-537-00	CARBON	470K	5%	1/4W
R601	1-246-537-00	CARBON	470K	5%	1/4W
R602	1-246-537-00	CARBON	470K	5%	1/4W
R603	1-246-489-00	CARBON	4.7K	5%	1/4W
R604	1-246-489-00	CARBON	4.7K	5%	1/4W
R605	1-247-833-00	CARBON	1.2K	5%	1/6W
R606	1-247-871-00	CARBON	47K	5%	1/6W
R607	1-247-851-00	CARBON	6.8K	5%	1/6W
R608	1-247-821-00	CARBON	390	5%	1/6W
R609	1-247-833-00	CARBON	1.2K	5%	1/6W
R610	1-247-871-00	CARBON	47K	5%	1/6W
R611	1-247-851-00	CARBON	6.8K	5%	1/6W
R612	1-247-821-00	CARBON	390	5%	1/6W
R613	1-247-833-00	CARBON	1.2K	5%	1/6W
R614	1-247-871-00	CARBON	47K	5%	1/6W
R615	1-247-851-00	CARBON	6.8K	5%	1/6W
R616	1-247-821-00	CARBON	390	5%	1/6W
R617	1-247-833-00	CARBON	1.2K	5%	1/6W
R618	1-247-871-00	CARBON	47K	5%	1/6W
R619	1-247-851-00	CARBON	6.8K	5%	1/6W
R620	1-247-821-00	CARBON	390	5%	1/6W
R621	1-247-833-00	CARBON	1.2K	5%	1/6W
R622	1-247-871-00	CARBON	47K	5%	1/6W
R623	1-247-851-00	CARBON	6.8K	5%	1/6W

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ELECTRICAL PARTS

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R624	1-247-821-00	CARBON	390	5%	1/6W	
R625	1-247-833-00	CARBON	1.2K	5%	1/6W	
R626	1-247-871-00	CARBON	47K	5%	1/6W	
R627	1-247-851-00	CARBON	6.8K	5%	1/6W	
R628	1-247-821-00	CARBON	390	5%	1/6W	
R629	1-247-833-00	CARBON	1.2K	5%	1/6W	
R630	1-247-871-00	CARBON	47K	5%	1/6W	
R631	1-247-851-00	CARBON	6.8K	5%	1/6W	
R632	1-247-821-00	CARBON	390	5%	1/6W	
R633	1-247-833-00	CARBON	1.2K	5%	1/6W	
R634	1-247-871-00	CARBON	47K	5%	1/6W	
R635	1-247-851-00	CARBON	6.8K	5%	1/6W	
R636	1-247-821-00	CARBON	390	5%	1/6W	
R637	1-247-833-00	CARBON	1.2K	5%	1/6W	
R638	1-247-871-00	CARBON	47K	5%	1/6W	
R639	1-247-851-00	CARBON	6.8K	5%	1/6W	
R640	1-247-821-00	CARBON	390	5%	1/6W	
R641	1-246-537-00	CARBON	470K	5%	1/4W	
R642	1-246-537-00	CARBON	470K	5%	1/4W	
R643	1-246-473-00	CARBON	1K	5%	1/4W	
R644	1-246-537-00	CARBON	470K	5%	1/4W	
R646	⚠.1-212-865-00	FUSIBLE	22	5%	1/4W	F
R648	⚠.1-212-865-00	FUSIBLE	22	5%	1/4W	F
R649	1-246-505-00	CARBON	22K	5%	1/4W	
R650	1-246-509-00	CARBON	33K	5%	1/4W	
R651	1-246-537-00	CARBON	470K	5%	1/4W	
R652	1-246-537-00	CARBON	470K	5%	1/4W	
R653	1-246-489-00	CARBON	4.7K	5%	1/4W	
R654	1-246-489-00	CARBON	4.7K	5%	1/4W	
R655	1-247-833-00	CARBON	1.2K	5%	1/6W	
R656	1-247-871-00	CARBON	47K	5%	1/6W	
R657	1-247-851-00	CARBON	6.8K	5%	1/6W	
R658	1-247-821-00	CARBON	390	5%	1/6W	
R659	1-247-833-00	CARBON	1.2K	5%	1/6W	
R660	1-247-871-00	CARBON	47K	5%	1/6W	
R661	1-247-851-00	CARBON	6.8K	5%	1/6W	
R662	1-247-821-00	CARBON	390	5%	1/6W	
R663	1-247-833-00	CARBON	1.2K	5%	1/6W	
R664	1-247-871-00	CARBON	47K	5%	1/6W	
R665	1-247-851-00	CARBON	6.8K	5%	1/6W	
R666	1-247-821-00	CARBON	390	5%	1/6W	
R667	1-247-833-00	CARBON	1.2K	5%	1/6W	
R668	1-247-871-00	CARBON	47K	5%	1/6W	
R669	1-247-851-00	CARBON	6.8K	5%	1/6W	
R670	1-247-821-00	CARBON	390	5%	1/6W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R671	1-247-833-00	CARBON	1.2K	5%	1/6W	
R672	1-247-871-00	CARBON	47K	5%	1/6W	
R673	1-247-851-00	CARBON	6.8K	5%	1/6W	
R674	1-247-821-00	CARBON	390	5%	1/6W	
R675	1-247-833-00	CARBON	1.2K	5%	1/6W	
R676	1-247-871-00	CARBON	47K	5%	1/6W	
R677	1-247-851-00	CARBON	6.8K	5%	1/6W	
R678	1-247-821-00	CARBON	390	5%	1/6W	
R679	1-247-833-00	CARBON	1.2K	5%	1/6W	
R680	1-247-871-00	CARBON	47K	5%	1/6W	
R681	1-247-851-00	CARBON	6.8K	5%	1/6W	
R682	1-247-821-00	CARBON	390	5%	1/6W	
R683	1-247-833-00	CARBON	1.2K	5%	1/6W	
R684	1-247-871-00	CARBON	47K	5%	1/6W	
R685	1-247-851-00	CARBON	6.8K	5%	1/6W	
R686	1-247-821-00	CARBON	390	5%	1/6W	
R687	1-247-833-00	CARBON	1.2K	5%	1/6W	
R688	1-247-871-00	CARBON	47K	5%	1/6W	
R689	1-247-851-00	CARBON	6.8K	5%	1/6W	
R690	1-247-821-00	CARBON	390	5%	1/6W	
R691	1-246-537-00	CARBON	470K	5%	1/4W	
R692	1-246-537-00	CARBON	470K	5%	1/4W	
R693	1-246-473-00	CARBON	1K	5%	1/4W	
R694	1-246-537-00	CARBON	470K	5%	1/4W	
R699	1-246-505-00	CARBON	22K	5%	1/4W	
R701	1-246-457-00	CARBON	220	5%	1/4W	
R702	1-246-457-00	CARBON	220	5%	1/4W	
R705	1-246-513-00	CARBON	47K	5%	1/4W	
R706	1-246-461-00	CARBON	330	5%	1/4W	
R707	1-246-501-00	CARBON	15K	5%	1/4W	
R708	1-246-513-00	CARBON	47K	5%	1/4W	
R709	1-246-453-00	CARBON	150	5%	1/4W	
R711	1-246-469-00	CARBON	680	5%	1/4W	
R712	1-246-469-00	CARBON	680	5%	1/4W	
R713	1-246-469-00	CARBON	680	5%	1/4W	
R714	1-246-469-00	CARBON	680	5%	1/4W	
R721	1-246-485-00	CARBON	3.3K	5%	1/4W	
R722	1-246-509-00	CARBON	33K	5%	1/4W	
R723	1-246-467-00	CARBON	560	5%	1/4W	
R724	1-246-509-00	CARBON	33K	5%	1/4W	
R725	⚠.1-212-898-00	FUSIBLE	510	5%	1/4W	F
R726	⚠.1-212-942-00	FUSIBLE	2.2	5%	1/2W	F
R727	⚠.1-217-399-00	FUSIBLE	100	5%	1/4W	F
R755	1-246-513-00	CARBON	47K	5%	1/4W	
R756	1-246-461-00	CARBON	330	5%	1/4W	

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- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

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ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R757	1-246-501-00	CARBON	15K	5%	1/4W	
R758	1-246-513-00	CARBON	47K	5%	1/4W	
R759	1-246-453-00	CARBON	150	5%	1/4W	
R771	1-246-485-00	CARBON	3.3K	5%	1/4W	
R772	1-246-509-00	CARBON	33K	5%	1/4W	
R773	1-246-467-00	CARBON	560	5%	1/4W	
R774	1-246-509-00	CARBON	33K	5%	1/4W	
R776 ⚠	1-212-942-00	FUSIBLE	2.2	5%	1/2W	F
R802	1-246-521-00	CARBON	100K	5%	1/4W	
R803	1-246-521-00	CARBON	100K	5%	1/4W	
R804	1-246-461-00	CARBON	330	5%	1/4W	
R805	1-246-457-00	CARBON	220	5%	1/4W	
R806	1-246-525-00	CARBON	150K	5%	1/4W	
R807	1-246-499-00	CARBON	12K	5%	1/4W	
R808	1-246-497-00	CARBON	10K	5%	1/4W	
R809	1-246-457-00	CARBON	220	5%	1/4W	
R810	1-246-457-00	CARBON	220	5%	1/4W	
R812	1-246-521-00	CARBON	100K	5%	1/4W	
R813	1-246-521-00	CARBON	100K	5%	1/4W	
R814	1-246-461-00	CARBON	330	5%	1/4W	
R815	1-246-457-00	CARBON	220	5%	1/4W	
R816	1-246-525-00	CARBON	150K	5%	1/4W	
R817	1-246-499-00	CARBON	12K	5%	1/4W	
R818	1-246-497-00	CARBON	10K	5%	1/4W	
R819	1-246-457-00	CARBON	220	5%	1/4W	
R820	1-246-457-00	CARBON	220	5%	1/4W	
R821	1-246-513-00	CARBON	47K	5%	1/4W	
R822	1-246-513-00	CARBON	47K	5%	1/4W	
R823	1-247-827-00	CARBON	680	5%	1/6W	
R824	1-246-473-00	CARBON	1K	5%	1/4W	
R825	1-246-497-00	CARBON	10K	5%	1/4W	
R826	1-246-497-00	CARBON	10K	5%	1/4W	
R827	1-246-497-00	CARBON	10K	5%	1/4W	
R828	1-246-497-00	CARBON	10K	5%	1/4W	
R829	1-246-494-00	CARBON	7.5K	5%	1/4W	
R830	1-246-494-00	CARBON	7.5K	5%	1/4W	
R831	1-246-489-00	CARBON	4.7K	5%	1/4W	
R832	1-246-497-00	CARBON	10K	5%	1/4W	
R833	1-246-473-00	CARBON	1K	5%	1/4W	
R834	1-246-521-00	CARBON	100K	5%	1/4W	
R835	1-246-497-00	CARBON	10K	5%	1/4W	
R836	1-247-815-00	CARBON	220	5%	1/6W	
R837	1-247-853-00	CARBON	8.2K	5%	1/6W	
R838	1-247-837-00	CARBON	1.8K	5%	1/6W	
R839	1-246-493-00	CARBON	6.8K	5%	1/4W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R840	1-246-493-00	CARBON	6.8K	5%	1/4W
R841	1-246-489-00	CARBON	4.7K	5%	1/4W
R842	1-246-489-00	CARBON	4.7K	5%	1/4W
R843	1-246-483-00	CARBON	2.7K	5%	1/4W
R844	1-246-511-00	CARBON	39K	5%	1/4W
R845	1-246-465-00	CARBON	470	5%	1/4W
R846	1-246-521-00	CARBON	100K	5%	1/4W
R847	1-246-521-00	CARBON	100K	5%	1/4W
R848	1-246-497-00	CARBON	10K	5%	1/4W
R849	1-246-489-00	CARBON	4.7K	5%	1/4W
R850	1-246-489-00	CARBON	4.7K	5%	1/4W
R851	1-246-501-00	CARBON	15K	5%	1/4W
R852	1-246-538-00	CARBON	510K	5%	1/4W
R853	1-246-538-00	CARBON	510K	5%	1/4W
R854	1-246-501-00	CARBON	15K	5%	1/4W
R855	1-247-879-00	CARBON	100K	5%	1/6W
R856	1-246-499-00	CARBON	12K	5%	1/4W
R857	1-247-855-00	CARBON	10K	5%	1/6W
R858	1-246-489-00	CARBON	4.7K	5%	1/4W
R860	1-246-465-00	CARBON	470	5%	1/4W
R861	1-246-465-00	CARBON	470	5%	1/4W
R862	1-246-473-00	CARBON	1K	5%	1/4W
R863	1-246-481-00	CARBON	2.2K	5%	1/4W
R864	1-246-497-00	CARBON	10K	5%	1/4W
R865	1-246-497-00	CARBON	10K	5%	1/4W
R866	1-246-497-00	CARBON	10K	5%	1/4W
R867	1-246-505-00	CARBON	22K	5%	1/4W
R868	1-246-497-00	CARBON	10K	5%	1/4W
R869	1-246-521-00	CARBON	100K	5%	1/4W
R870	1-246-497-00	CARBON	10K	5%	1/4W
R871	1-246-497-00	CARBON	10K	5%	1/4W
R872	1-246-497-00	CARBON	10K	5%	1/4W
R873	1-246-505-00	CARBON	22K	5%	1/4W
R874	1-246-497-00	CARBON	10K	5%	1/4W
R875	1-246-521-00	CARBON	100K	5%	1/4W
R876	1-246-497-00	CARBON	10K	5%	1/4W
R877	1-246-499-00	CARBON	12K	5%	1/4W
R879	1-247-843-00	CARBON	3.3K	5%	1/6W
R880	1-246-545-00	CARBON	1M	5%	1/4W
R881	1-246-545-00	CARBON	1M	5%	1/4W
R882	1-246-545-00	CARBON	1M	5%	1/4W
R883	1-246-497-00	CARBON	10K	5%	1/4W
R884	1-246-497-00	CARBON	10K	5%	1/4W
R885	1-246-513-00	CARBON	47K	5%	1/4W
R886	1-246-489-00	CARBON	4.7K	5%	1/4W

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- All resistors are in ohms.
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- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

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ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R887	1-246-513-00	CARBON	47K	5%	1/4W	
R888	1-246-513-00	CARBON	47K	5%	1/4W	
R890	1-247-873-00	CARBON	56K	5%	1/6W	
R891	1-246-503-00	CARBON	18K	5%	1/4W	
R892	1-246-481-00	CARBON	2.2K	5%	1/4W	
R893	1-246-473-00	CARBON	1K	5%	1/4W	
R894	1-246-473-00	CARBON	1K	5%	1/4W	
R895	1-246-473-00	CARBON	1K	5%	1/4W	
R896	1-246-473-00	CARBON	1K	5%	1/4W	
R897	1-246-545-00	CARBON	1M	5%	1/4W	
R898	1-246-545-00	CARBON	1M	5%	1/4W	
R899	1-246-545-00	CARBON	1M	5%	1/4W	
R901	⚠.1-246-481-00	CARBON	2.2K	5%	1/4W	
R902	⚠.1-246-473-00	CARBON	1K	5%	1/4W	
R903	⚠.1-246-489-00	CARBON	4.7K	5%	1/4W	
R904	⚠.1-217-477-00	FUSIBLE	4.7	5%	1W	F
R905	⚠.1-246-480-00	CARBON	2K	5%	1/4W	
R906	⚠.1-246-473-00	CARBON	1K	5%	1/4W	
R907	⚠.1-246-489-00	CARBON	4.7K	5%	1/4W	
R908	⚠.1-212-958-00	FUSIBLE	10	5%	1/2W	F
R909	⚠.1-246-481-00	CARBON	2.2K	5%	1/4W	
R910	⚠.1-246-473-00	CARBON	1K	5%	1/4W	
R911	⚠.1-246-456-00	CARBON	200	5%	1/4W	
R912	⚠.1-246-457-00	CARBON	220	5%	1/4W	
R913	⚠.1-246-465-00	CARBON	470	5%	1/4W	
R914	⚠.1-246-473-00	CARBON	1K	5%	1/4W	
R917	⚠.1-212-865-00	FUSIBLE	22	5%	1/4W	F
R920	1-247-831-00	CARBON	1K	5%	1/6W	
R922	1-246-497-00	CARBON	10K	5%	1/4W	
R923	1-247-831-00	CARBON	1K	5%	1/6W	
R924	1-246-513-00	CARBON	47K	5%	1/4W	
R925	1-247-853-00	CARBON	8.2K	5%	1/6W	
R926	1-246-497-00	CARBON	10K	5%	1/4W	
R927	1-246-473-00	CARBON	1K	5%	1/4W	
R928	1-246-545-00	CARBON	1M	5%	1/4W	
R929	1-246-517-00	CARBON	68K	5%	1/4W	
R930	1-247-831-00	CARBON	1K	5%	1/6W	
R932	1-246-497-00	CARBON	10K	5%	1/4W	
R933	1-247-831-00	CARBON	1K	5%	1/6W	
R934	1-246-513-00	CARBON	47K	5%	1/4W	
R935	1-247-853-00	CARBON	8.2K	5%	1/6W	
R936	1-246-497-00	CARBON	10K	5%	1/4W	
R937	1-246-473-00	CARBON	1K	5%	1/4W	
R938	1-246-545-00	CARBON	1M	5%	1/4W	
R939	1-246-517-00	CARBON	68K	5%	1/4W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R940	1-247-855-00	CARBON	10K	5%	1/6W
R941	1-247-855-00	CARBON	10K	5%	1/6W
R1001	1-246-455-00	CARBON	180	5%	1/4W
R1002	1-246-489-00	CARBON	4.7K	5%	1/4W
R1003	1-246-497-00	CARBON	10K	5%	1/4W
R1004	1-246-489-00	CARBON	4.7K	5%	1/4W
R1005	1-246-517-00	CARBON	68K	5%	1/4W
R1006	1-246-519-00	CARBON	82K	5%	1/4W
R1007	1-246-489-00	CARBON	4.7K	5%	1/4W
R1008	1-246-451-00	CARBON	120	5%	1/4W
R1009	1-246-489-00	CARBON	4.7K	5%	1/4W
R1010	1-246-529-00	CARBON	220K	5%	1/4W
R1011	1-246-497-00	CARBON	10K	5%	1/4W
R1012	1-246-449-00	CARBON	100	5%	1/4W
R1013	1-246-497-00	CARBON	10K	5%	1/4W
R1014	1-246-497-00	CARBON	10K	5%	1/4W
R1015	1-246-467-00	CARBON	560	5%	1/4W
R1016	1-246-481-00	CARBON	2.2K	5%	1/4W
R1017	1-246-481-00	CARBON	2.2K	5%	1/4W
R1018	1-246-497-00	CARBON	10K	5%	1/4W
R1020	1-246-473-00	CARBON	1K	5%	1/4W
R1021	1-246-473-00	CARBON	1K	5%	1/4W
R1023	1-246-521-00	CARBON	100K	5%	1/4W
R1024	1-246-521-00	CARBON	100K	5%	1/4W
R1025	1-246-521-00	CARBON	100K	5%	1/4W
R1026	1-246-521-00	CARBON	100K	5%	1/4W
R1027	1-246-521-00	CARBON	100K	5%	1/4W
R1028	1-246-521-00	CARBON	100K	5%	1/4W
R1029	1-246-521-00	CARBON	100K	5%	1/4W
R1030	1-246-473-00	CARBON	1K	5%	1/4W
R1031	1-246-473-00	CARBON	1K	5%	1/4W
R1032	1-246-473-00	CARBON	1K	5%	1/4W
R1033	1-246-521-00	CARBON	100K	5%	1/4W
R1034	1-246-521-00	CARBON	100K	5%	1/4W
R1035	1-246-473-00	CARBON	1K	5%	1/4W
R1036	1-246-473-00	CARBON	1K	5%	1/4W
R1037	1-246-473-00	CARBON	1K	5%	1/4W
R1038	1-246-473-00	CARBON	1K	5%	1/4W
R1039	1-246-473-00	CARBON	1K	5%	1/4W
R1040	1-246-489-00	CARBON	4.7K	5%	1/4W
R1041	1-246-497-00	CARBON	10K	5%	1/4W
R1042	1-246-489-00	CARBON	4.7K	5%	1/4W
R1043	1-246-497-00	CARBON	10K	5%	1/4W
R1044	1-246-497-00	CARBON	10K	5%	1/4W
R1046	1-246-489-00	CARBON	4.7K	5%	1/4W

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MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description		
R1047	1-246-497-00	CARBON 10K	5%	1/4W
R1048	1-246-489-00	CARBON 4.7K	5%	1/4W
R1049	1-246-497-00	CARBON 10K	5%	1/4W
R1050	1-246-473-00	CARBON 1K	5%	1/4W
R1051	1-246-473-00	CARBON 1K	5%	1/4W
R1052	1-246-473-00	CARBON 1K	5%	1/4W
R1053	1-246-473-00	CARBON 1K	5%	1/4W
R1054	1-246-521-00	CARBON 100K	5%	1/4W
R1055	1-246-521-00	CARBON 100K	5%	1/4W
R1056	1-246-521-00	CARBON 100K	5%	1/4W
R1057	1-246-497-00	CARBON 10K	5%	1/4W
R1058	1-246-473-00	CARBON 1K	5%	1/4W
R1059	1-246-457-00	CARBON 220	5%	1/4W
R1060	1-246-521-00	CARBON 100K	5%	1/4W
R1061	1-246-521-00	CARBON 100K	5%	1/4W
R1062	1-246-521-00	CARBON 100K	5%	1/4W
R1063	1-246-521-00	CARBON 100K	5%	1/4W
R1064	1-246-521-00	CARBON 100K	5%	1/4W
R1065	1-246-505-00	CARBON 22K	5%	1/4W
R1066	1-246-521-00	CARBON 100K	5%	1/4W
R1067	1-246-521-00	CARBON 100K	5%	1/4W
R1068	1-246-521-00	CARBON 100K	5%	1/4W
R1069	1-246-521-00	CARBON 100K	5%	1/4W
R1070	1-246-521-00	CARBON 100K	5%	1/4W
R1071	1-246-545-00	CARBON 1M	5%	1/4W
R1072	1-246-497-00	CARBON 10K	5%	1/4W
R1073	1-247-871-00	CARBON 47K	5%	1/6W
R1075	1-246-521-00	CARBON 100K	5%	1/4W
R1076	1-246-457-00	CARBON 220	5%	1/4W
R1077	1-246-497-00	CARBON 10K	5%	1/4W
R1078	1-246-457-00	CARBON 220	5%	1/4W
R1079	1-246-497-00	CARBON 10K	5%	1/4W
R1080	1-246-545-00	CARBON 1M	5%	1/4W
R1081	1-246-539-00	CARBON 560K	5%	1/4W
R1082	1-246-497-00	CARBON 10K	5%	1/4W
R1083	1-246-497-00	CARBON 10K	5%	1/4W
R1084	1-246-497-00	CARBON 10K	5%	1/4W
R1085	1-246-497-00	CARBON 10K	5%	1/4W
R1090	1-246-457-00	CARBON 220	5%	1/4W
R1091	1-246-461-00	CARBON 330	5%	1/4W
R1095	1-246-497-00	CARBON 10K	5%	1/4W
R1096	1-246-461-00	CARBON 330	5%	1/4W
R1100	1-246-521-00	CARBON 100K	5%	1/4W
R1101	1-246-465-00	CARBON 470	5%	1/4W
R1102	1-246-455-00	CARBON 180	5%	1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description		
R1103	1-246-533-00	CARBON 330K	5%	1/4W
R1104	1-246-499-00	CARBON 12K	5%	1/4W
R1105	1-246-499-00	CARBON 12K	5%	1/4W
R1106	1-246-499-00	CARBON 12K	5%	1/4W
R1107	1-246-501-00	CARBON 15K	5%	1/4W
R1108	1-246-513-00	CARBON 47K	5%	1/4W
R1109	1-246-529-00	CARBON 220K	5%	1/4W
R1111	1-246-530-00	CARBON 240K	5%	1/4W
R1112	1-246-530-00	CARBON 240K	5%	1/4W
R1113	1-246-501-00	CARBON 15K	5%	1/4W
R1114	1-246-461-00	CARBON 330	5%	1/4W
R1115	1-246-449-00	CARBON 100	5%	1/4W
R1116	1-246-492-00	CARBON 6.2K	5%	1/4W
R1117	1-246-475-00	CARBON 1.2K	5%	1/4W
R1118	1-246-539-00	CARBON 560K	5%	1/4W
R1119	1-246-509-00	CARBON 33K	5%	1/4W
R1120	1-246-467-00	CARBON 560	5%	1/4W
R1121	1-246-501-00	CARBON 15K	5%	1/4W
R1122	1-246-505-00	CARBON 22K	5%	1/4W
R1124	1-246-513-00	CARBON 47K	5%	1/4W
R1125	1-246-481-00	CARBON 2.2K	5%	1/4W
R1126	1-246-489-00	CARBON 4.7K	5%	1/4W
R1127	1-246-497-00	CARBON 10K	5%	1/4W
R1128	1-246-489-00	CARBON 4.7K	5%	1/4W
R1129	1-246-461-00	CARBON 330	5%	1/4W
R1130	1-246-465-00	CARBON 470	5%	1/4W
R1131	1-246-529-00	CARBON 220K	5%	1/4W
R1132	1-246-489-00	CARBON 4.7K	5%	1/4W
R1201	1-246-465-00	CARBON 470	5%	1/4W
R1202	1-246-455-00	CARBON 180	5%	1/4W
R1203	1-246-533-00	CARBON 330K	5%	1/4W
R1204	1-246-499-00	CARBON 12K	5%	1/4W
R1205	1-246-499-00	CARBON 12K	5%	1/4W
R1206	1-246-499-00	CARBON 12K	5%	1/4W
R1207	1-246-501-00	CARBON 15K	5%	1/4W
R1208	1-246-513-00	CARBON 47K	5%	1/4W
R1209	1-246-529-00	CARBON 220K	5%	1/4W
R1211	1-246-530-00	CARBON 240K	5%	1/4W
R1212	1-246-530-00	CARBON 240K	5%	1/4W
R1213	1-246-501-00	CARBON 15K	5%	1/4W
R1214	1-246-461-00	CARBON 330	5%	1/4W
R1215	1-246-449-00	CARBON 100	5%	1/4W
R1216	1-246-492-00	CARBON 6.2K	5%	1/4W
R1217	1-246-475-00	CARBON 1.2K	5%	1/4W
R1218	1-246-539-00	CARBON 560K	5%	1/4W

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- MMH : mH, UH : μH

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In each case, U : μ, for example:
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UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R1219	1-246-509-00	CARBON	33K	5%	1/4W
R1220	1-246-467-00	CARBON	560	5%	1/4W
R1221	1-246-501-00	CARBON	15K	5%	1/4W
R1224	1-246-513-00	CARBON	47K	5%	1/4W
R1225	1-246-481-00	CARBON	2.2K	5%	1/4W
R1226	1-246-489-00	CARBON	4.7K	5%	1/4W
R1228	1-246-489-00	CARBON	4.7K	5%	1/4W
R1229	1-246-461-00	CARBON	330	5%	1/4W
R1301	1-246-514-00	CARBON	51K	5%	1/4W
R1302	1-246-473-00	CARBON	1K	5%	1/4W
R1303	1-246-473-00	CARBON	1K	5%	1/4W
R1304	1-246-473-00	CARBON	1K	5%	1/4W
R1305	1-246-473-00	CARBON	1K	5%	1/4W
R1306	1-246-473-00	CARBON	1K	5%	1/4W
R1307	1-246-473-00	CARBON	1K	5%	1/4W
R1308	1-246-473-00	CARBON	1K	5%	1/4W
R1309	1-246-505-00	CARBON	22K	5%	1/4W
R1310	1-246-521-00	CARBON	100K	5%	1/4W
R1311	1-246-461-00	CARBON	330	5%	1/4W
R1312	1-246-505-00	CARBON	22K	5%	1/4W
R1313	1-246-505-00	CARBON	22K	5%	1/4W
R1314	1-246-489-00	CARBON	4.7K	5%	1/4W
R1315	1-246-505-00	CARBON	22K	5%	1/4W
R1317	1-246-529-00	CARBON	220K	5%	1/4W
R1318	1-246-505-00	CARBON	22K	5%	1/4W
R1319	1-246-481-00	CARBON	2.2K	5%	1/4W
R1320	1-246-481-00	CARBON	2.2K	5%	1/4W
R1321	1-246-505-00	CARBON	22K	5%	1/4W
R1322	1-247-819-00	CARBON	330	5%	1/6W
R1323	1-247-855-00	CARBON	10K	5%	1/6W
R1324	1-246-473-00	CARBON	1K	5%	1/4W
R1325	1-246-473-00	CARBON	1K	5%	1/4W
R1326	1-246-473-00	CARBON	1K	5%	1/4W
R1327	1-246-469-00	CARBON	680	5%	1/4W
R1328	1-246-461-00	CARBON	330	5%	1/4W
R1329	1-246-457-00	CARBON	220	5%	1/4W
R1401	1-246-449-00	CARBON	100	5%	1/4W
R1402	1-246-537-00	CARBON	470K	5%	1/4W
R1403	1-246-491-00	CARBON	5.6K	5%	1/4W
R1404	1-246-497-00	CARBON	10K	5%	1/4W
R1405	1-246-457-00	CARBON	220	5%	1/4W
R1406	1-246-473-00	CARBON	1K	5%	1/4W
R1407	1-246-505-00	CARBON	22K	5%	1/4W
R1408	1-246-537-00	CARBON	470K	5%	1/4W
R1409	1-246-521-00	CARBON	100K	5%	1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R1410	1-246-488-00	CARBON	4.3K	5%	1/4W
R1411	1-246-530-00	CARBON	240K	5%	1/4W
R1412	1-246-530-00	CARBON	240K	5%	1/4W
R1413	1-246-501-00	CARBON	15K	5%	1/4W
R1414	1-246-449-00	CARBON	100	5%	1/4W
R1415	1-246-492-00	CARBON	6.2K	5%	1/4W
R1416	1-246-475-00	CARBON	1.2K	5%	1/4W
R1417	1-246-467-00	CARBON	560	5%	1/4W
R1418	1-246-538-00	CARBON	510K	5%	1/4W
R1419	1-246-520-00	CARBON	91K	5%	1/4W
R1420	1-246-506-00	CARBON	24K	5%	1/4W
R1421	1-246-537-00	CARBON	470K	5%	1/4W
R1422	1-246-481-00	CARBON	2.2K	5%	1/4W
R1423	1-246-518-00	CARBON	75K	5%	1/4W
R1424	1-246-513-00	CARBON	47K	5%	1/4W
R1425	1-246-497-00	CARBON	10K	5%	1/4W
R1426	1-246-489-00	CARBON	4.7K	5%	1/4W
R1427	1-246-473-00	CARBON	1K	5%	1/4W
R1428	1-246-509-00	CARBON	33K	5%	1/4W
R1429	1-246-455-00	CARBON	180	5%	1/4W
R1430	1-246-497-00	CARBON	10K	5%	1/4W
R1431	1-246-499-00	CARBON	12K	5%	1/4W
R1432	1-246-467-00	CARBON	560	5%	1/4W
R1433	1-246-489-00	CARBON	4.7K	5%	1/4W
R1434	1-246-491-00	CARBON	5.6K	5%	1/4W
R1435	1-246-477-00	CARBON	1.5K	5%	1/4W
R1436	1-246-505-00	CARBON	22K	5%	1/4W
R1437	1-246-505-00	CARBON	22K	5%	1/4W
R1438	1-246-505-00	CARBON	22K	5%	1/4W
R1439	1-246-490-00	CARBON	5.1K	5%	1/4W
R1440	1-246-529-00	CARBON	220K	5%	1/4W
R1441	1-246-521-00	CARBON	100K	5%	1/4W
R1442	1-246-524-00	CARBON	130K	5%	1/4W
R1443	1-246-524-00	CARBON	130K	5%	1/4W
R1444	1-246-529-00	CARBON	220K	5%	1/4W
R1445	1-246-516-00	CARBON	62K	5%	1/4W
R1446	1-246-497-00	CARBON	10K	5%	1/4W
R1447	1-246-467-00	CARBON	560	5%	1/4W
R1448	1-246-487-00	CARBON	3.9K	5%	1/4W
R1449	1-246-500-00	CARBON	13K	5%	1/4W
R1451	1-246-485-00	CARBON	3.3K	5%	1/4W
R1452	1-246-481-00	CARBON	2.2K	5%	1/4W
R1453	1-246-497-00	CARBON	10K	5%	1/4W
R1454	1-246-489-00	CARBON	4.7K	5%	1/4W
R1455	1-246-489-00	CARBON	4.7K	5%	1/4W

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- MMH : mH, UH : μH

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In each case, U : μ, for example:
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UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R1456	1-246-521-00	CARBON	100K	5%	1/4W	
R1457	1-246-489-00	CARBON	4.7K	5%	1/4W	
R1458	1-246-505-00	CARBON	22K	5%	1/4W	
R1459	1-246-497-00	CARBON	10K	5%	1/4W	
R1460	1-246-489-00	CARBON	4.7K	5%	1/4W	
R1461	1-246-453-00	CARBON	150	5%	1/4W	
R1462	1-246-453-00	CARBON	150	5%	1/4W	
R1463	1-246-497-00	CARBON	10K	5%	1/4W	
R1464	1-246-489-00	CARBON	4.7K	5%	1/4W	
R1465	1-246-497-00	CARBON	10K	5%	1/4W	
R1466	1-246-497-00	CARBON	10K	5%	1/4W	
R1467	1-246-505-00	CARBON	22K	5%	1/4W	
R1468	1-246-497-00	CARBON	10K	5%	1/4W	
R1469	1-246-495-00	CARBON	8.2K	5%	1/4W	
R1470	1-246-483-00	CARBON	2.7K	5%	1/4W	
R1471	1-246-473-00	CARBON	1K	5%	1/4W	
R1472⚠	1-217-395-00	FUSIBLE	47	5%	1/4W	F
R1473	1-246-497-00	CARBON	10K	5%	1/4W	
R1501	1-246-449-00	CARBON	100	5%	1/4W	
R1502	1-246-537-00	CARBON	470K	5%	1/4W	
R1503	1-246-491-00	CARBON	5.6K	5%	1/4W	
R1504	1-246-497-00	CARBON	10K	5%	1/4W	
R1505	1-246-457-00	CARBON	220	5%	1/4W	
R1506	1-246-473-00	CARBON	1K	5%	1/4W	
R1507	1-246-505-00	CARBON	22K	5%	1/4W	
R1508	1-246-537-00	CARBON	470K	5%	1/4W	
R1509	1-246-521-00	CARBON	100K	5%	1/4W	
R1510	1-246-488-00	CARBON	4.3K	5%	1/4W	
R1511	1-246-530-00	CARBON	240K	5%	1/4W	
R1512	1-246-530-00	CARBON	240K	5%	1/4W	
R1513	1-246-501-00	CARBON	15K	5%	1/4W	
R1514	1-246-449-00	CARBON	100	5%	1/4W	
R1515	1-246-492-00	CARBON	6.2K	5%	1/4W	
R1516	1-246-475-00	CARBON	1.2K	5%	1/4W	
R1517	1-246-467-00	CARBON	560	5%	1/4W	
R1518	1-246-538-00	CARBON	510K	5%	1/4W	
R1519	1-246-520-00	CARBON	91K	5%	1/4W	
R1520	1-246-506-00	CARBON	24K	5%	1/4W	
R1521	1-246-537-00	CARBON	470K	5%	1/4W	
R1522	1-246-481-00	CARBON	2.2K	5%	1/4W	
R1523	1-246-518-00	CARBON	75K	5%	1/4W	
R1524	1-246-513-00	CARBON	47K	5%	1/4W	
R1525	1-246-497-00	CARBON	10K	5%	1/4W	
R1526	1-246-489-00	CARBON	4.7K	5%	1/4W	
R1527	1-246-473-00	CARBON	1K	5%	1/4W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R1528	1-246-509-00	CARBON	33K	5%	1/4W
R1529	1-246-455-00	CARBON	180	5%	1/4W
R1530	1-246-497-00	CARBON	10K	5%	1/4W
R1531	1-246-499-00	CARBON	12K	5%	1/4W
R1532	1-246-467-00	CARBON	560	5%	1/4W
R1533	1-246-489-00	CARBON	4.7K	5%	1/4W
R1534	1-246-491-00	CARBON	5.6K	5%	1/4W
R1535	1-246-477-00	CARBON	1.5K	5%	1/4W
R1536	1-246-505-00	CARBON	22K	5%	1/4W
R1537	1-246-505-00	CARBON	22K	5%	1/4W
R1538	1-246-505-00	CARBON	22K	5%	1/4W
R1539	1-246-490-00	CARBON	5.1K	5%	1/4W
R1540	1-246-529-00	CARBON	220K	5%	1/4W
R1541	1-246-521-00	CARBON	100K	5%	1/4W
R1542	1-246-524-00	CARBON	130K	5%	1/4W
R1543	1-246-524-00	CARBON	130K	5%	1/4W
R1544	1-246-529-00	CARBON	220K	5%	1/4W
R1545	1-246-516-00	CARBON	62K	5%	1/4W
R1546	1-247-855-00	CARBON	10K	5%	1/6W
R1547	1-246-467-00	CARBON	560	5%	1/4W
R1548	1-246-487-00	CARBON	3.9K	5%	1/4W
R1549	1-246-500-00	CARBON	13K	5%	1/4W
RV001	1-226-236-00	RES, ADJ, CARBON 10K			
RV002	1-226-238-00	RES, ADJ, CARBON 50K			
RV101	1-230-001-00	RES, VAR, CARBON 50K			
RV102	1-230-003-00	RES, VAR, CARBON 20K/20K			
RV152	1-230-003-00	RES, VAR, CARBON 20K/20K			
RV201	1-230-001-00	RES, VAR, CARBON 50K			
RV202	1-230-003-00	RES, VAR, CARBON 20K/20K			
RV252	1-230-003-00	RES, VAR, CARBON 20K/20K			
RV301	1-230-005-00	RES, VAR, CARBON 20K			
RV302	1-230-004-00	RES, VAR, CARBON 100K			
RV303	1-230-004-00	RES, VAR, CARBON 100K			
RV304	1-230-002-00	RES, VAR, CARBON 10K			
RV401	1-230-005-00	RES, VAR, CARBON 20K			
RV402	1-230-004-00	RES, VAR, CARBON 100K			
RV403	1-230-004-00	RES, VAR, CARBON 100K			
RV404	1-230-002-00	RES, VAR, CARBON 10K			
RV521	1-226-240-00	RES, ADJ, CARBON 200K			
RV522	1-230-008-00	RES, VAR, SLIDE 20K/20K			
RV523	1-230-008-00	RES, VAR, SLIDE 20K/20K			
RV571	1-226-240-00	RES, ADJ, CARBON 200K			
RV572	1-230-008-00	RES, VAR, SLIDE 20K/20K			
RV573	1-230-008-00	RES, VAR, SLIDE 20K/20K			
RV601	1-230-009-00	RES, VAR, SLIDE 250K			
RV602	1-230-009-00	RES, VAR, SLIDE 250K			

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
RV603	1-230-009-00	RES, VAR, SLIDE 250K
RV604	1-230-009-00	RES, VAR, SLIDE 250K
RV605	1-230-009-00	RES, VAR, SLIDE 250K
RV606	1-230-009-00	RES, VAR, SLIDE 250K
RV607	1-230-009-00	RES, VAR, SLIDE 250K
RV608	1-230-009-00	RES, VAR, SLIDE 250K
RV609	1-230-009-00	RES, VAR, SLIDE 250K
RV651	1-230-009-00	RES, VAR, SLIDE 250K
RV652	1-230-009-00	RES, VAR, SLIDE 250K
RV653	1-230-009-00	RES, VAR, SLIDE 250K
RV654	1-230-009-00	RES, VAR, SLIDE 250K
RV655	1-230-009-00	RES, VAR, SLIDE 250K
RV656	1-230-009-00	RES, VAR, SLIDE 250K
RV657	1-230-009-00	RES, VAR, SLIDE 250K
RV658	1-230-009-00	RES, VAR, SLIDE 250K
RV659	1-230-009-00	RES, VAR, SLIDE 250K
RV701	1-230-006-00	RES, VAR, CARBON 20K/20K
RV702	1-230-003-00	RES, VAR, CARBON 20K/20K
RV751	1-230-006-00	RES, VAR, CARBON 20K/20K
RV752	1-230-003-00	RES, VAR, CARBON 20K/20K
RV801	1-230-005-00	RES, VAR, CARBON 20K
RV1001	1-226-232-00	RES, ADJ, CARBON 500
RV1002	1-226-239-00	RES, ADJ, CARBON 100K
RV1099	1-230-010-00	RES, VAR, CARBON 200
RV1101	1-226-432-00	RES, ADJ, CARBON 20K
RV1201	1-226-432-00	RES, ADJ, CARBON 20K
RV1401	1-226-238-00	RES, ADJ, CARBON 50K
RV1402	1-226-238-00	RES, ADJ, CARBON 50K
RV1403	1-226-434-00	RES, ADJ, CARBON 100K
RV1501	1-226-238-00	RES, ADJ, CARBON 50K
RV1502	1-226-238-00	RES, ADJ, CARBON 50K
RV1503	1-226-434-00	RES, ADJ, CARBON 100K
RY401	1-515-323-00	RELAY
S001	1-554-526-00	SWITCH, ROTARY SLIDE
S002	1-554-431-00	SWITCH, PUSH (1 KEY)
S101	1-554-433-00	SWITCH, ROTARY
S102	1-554-428-00	SWITCH, PUSH (1 KEY)
S103	1-554-428-00	SWITCH, PUSH (1 KEY)
S151	1-554-433-00	SWITCH, ROTARY
S201	1-554-433-00	SWITCH, ROTARY
S202	1-554-428-00	SWITCH, PUSH (1 KEY)
S203	1-554-428-00	SWITCH, PUSH (1 KEY)
S251	1-554-433-00	SWITCH, ROTARY
S301	1-554-434-00	SWITCH, ROTARY
S302	1-554-428-00	SWITCH, PUSH (1 KEY)

ELECTRICAL PARTS

Ref.No.	Part No.	Description
S401	1-554-434-00	SWITCH, ROTARY
S402	1-554-428-00	SWITCH, PUSH (1 KEY)
S701	1-552-625-00	SWITCH, SLIDE
S801	1-554-427-00	SWITCH, PUSH (5 KEY)
S802	1-554-427-00	SWITCH, PUSH (5 KEY)
S803	1-554-427-00	SWITCH, PUSH (5 KEY)
S804	1-554-427-00	SWITCH, PUSH (5 KEY)
S805	1-554-427-00	SWITCH, PUSH (5 KEY)
S806	1-554-429-00	SWITCH, PUSH (2 KEY)
S807	1-554-429-00	SWITCH, PUSH (2 KEY)
S808	1-554-430-00	SWITCH, PUSH (2 KEY)
S809	1-554-430-00	SWITCH, PUSH (2 KEY)
S901 ⚠	1-553-318-00	SWITCH, PUSH (AC POWER)
S1001	1-554-435-00	SWITCH, KEY BOARD
S1002	1-554-435-00	SWITCH, KEY BOARD
S1090	1-553-997-00	SWITCH, KEY BOARD
S1091	1-553-997-00	SWITCH, KEY BOARD
S1092	1-553-997-00	SWITCH, KEY BOARD
S1093	1-553-997-00	SWITCH, KEY BOARD
S1094	1-553-997-00	SWITCH, KEY BOARD
S1101	1-553-975-00	SWITCH, PUSH (1 KEY)
S1301	1-552-809-00	SWITCH, SLIDE
S1302	1-516-870-00	SWITCH, SLIDE
S1303	1-554-426-00	SWITCH, PUSH (2 KEY)
S1304	1-553-997-00	SWITCH, KEY BOARD
S1305	1-553-997-00	SWITCH, KEY BOARD
S1306	1-553-997-00	SWITCH, KEY BOARD
S1307	1-553-997-00	SWITCH, KEY BOARD
S1308	1-553-997-00	SWITCH, KEY BOARD
S1309	1-553-997-00	SWITCH, KEY BOARD
S1310	1-553-997-00	SWITCH, KEY BOARD
S1350	1-554-205-00	SWITCH, PUSH (FOR DECK B)
S1351	1-554-205-00	SWITCH, PUSH (FOR DECK B)
S1352	1-554-205-00	SWITCH, PUSH
S1353	1-554-205-00	SWITCH, PUSH
S1354	1-554-205-00	SWITCH, PUSH
T901 ⚠	1-447-587-00	TRANSFORMER, POWER

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- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
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CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

SOUND PROCESSOR

PRS-2121

AEP Model

SUPPLEMENT

No.1
August, 1983

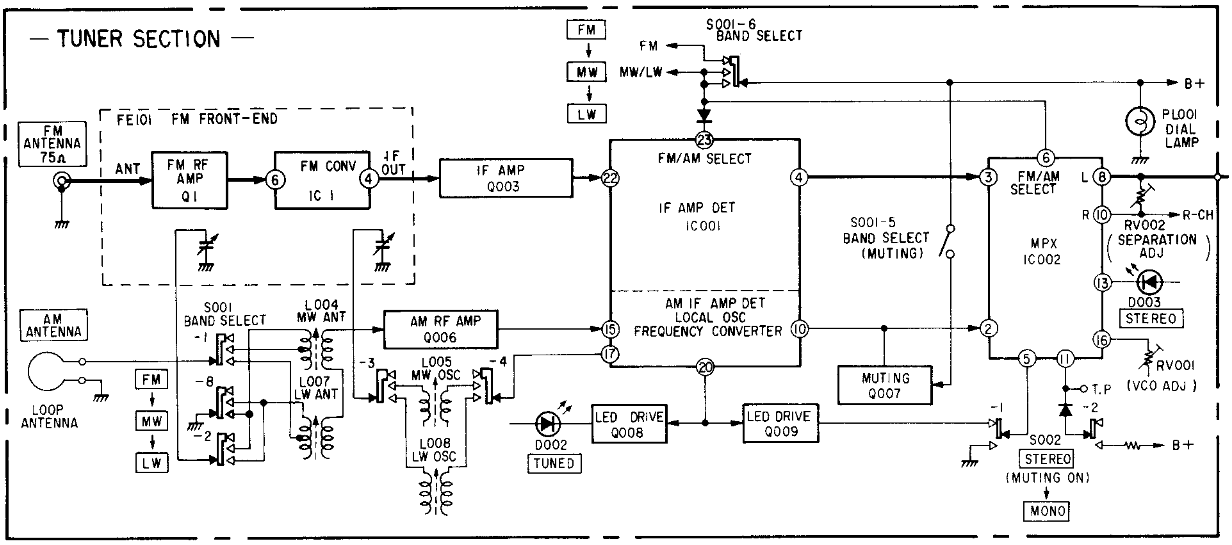
File this supplement with the service manual.

Tuner section has been changed for W-Germany model. When repairing W-Germany model, refer to this supplement.

SONY®
SERVICE MANUAL

SECTION 1
BLOCK DIAGRAM

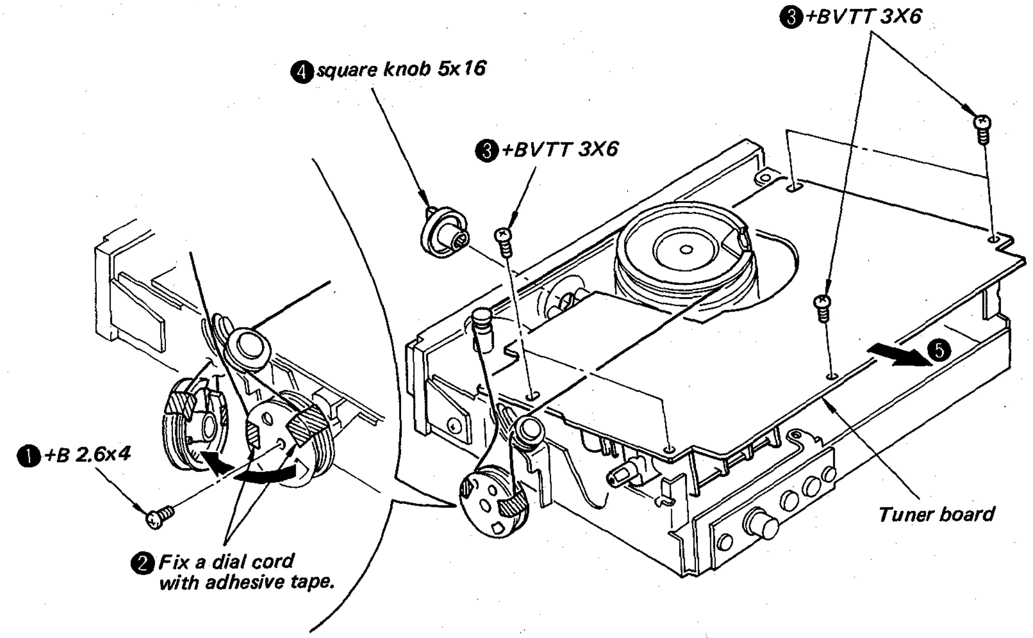
- Refer to page 23 of service manual for the other section in the block diagram.


— TUNER SECTION —
FM
MW
LW
S001-6
BAND SELECT
FM
MW/LW
B+
PL001
DIAL
LAMP
FM
ANTENNA
75Ω
FE101 FM FRONT-END
ANT
FM RF
AMP
Q1
6
FM CONV
IC 1
4
IF
OUT
IF AMP
Q003
22
23
FM/AM SELECT
IF AMP DET
IC001
4
S001-5
BAND SELECT
(MUTING)
6
3
FM/AM
SELECT
L
8
R
10
R-CH
RV002
(SEPARATION ADJ)
MPX
IC002
13
D003
STEREO
AM
ANTENNA
S001
BAND SELECT
-1
L004
MW ANT
AM RF AMP
Q006
15
AM IF AMP DET
LOCAL OSC
FREQUENCY CONVERTER
10
2
16
RV001
(VCO ADJ)
17
20
5
11
LOOP
ANTENNA
FM
MW
LW
-8
-2
L007
LW ANT
-3
L005
MW OSC
-4
L008
LW OSC
MUTING
Q007
T.P
D002
TUNED
LED DRIVE
Q008
LED DRIVE
Q009
-1
-2
S002
STEREO
(MUTING ON)
MONO
B+

SECTION 2
DISASSEMBLY

- Refer to page 27 of service manual for the other section in the disassembly.

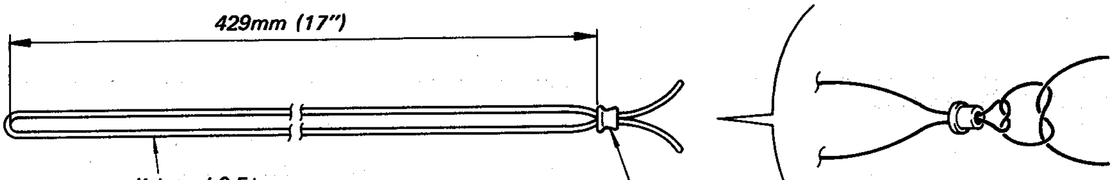
TUNER BOARD REMOVAL


③+BVTT 3X6
④square knob 5x16
③+BVTT 3X6
⑤
①+B 2.6x4
Tuner board
②Fix a dial cord with adhesive tape.

DIAL CORD STRINGING

1) Preparation

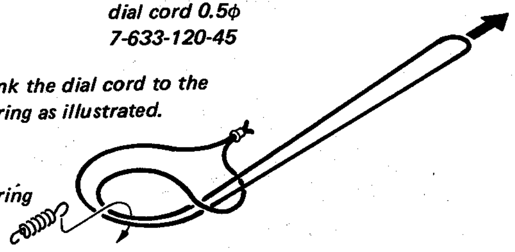
①



dial cord 0.5ϕ
7-633-120-45

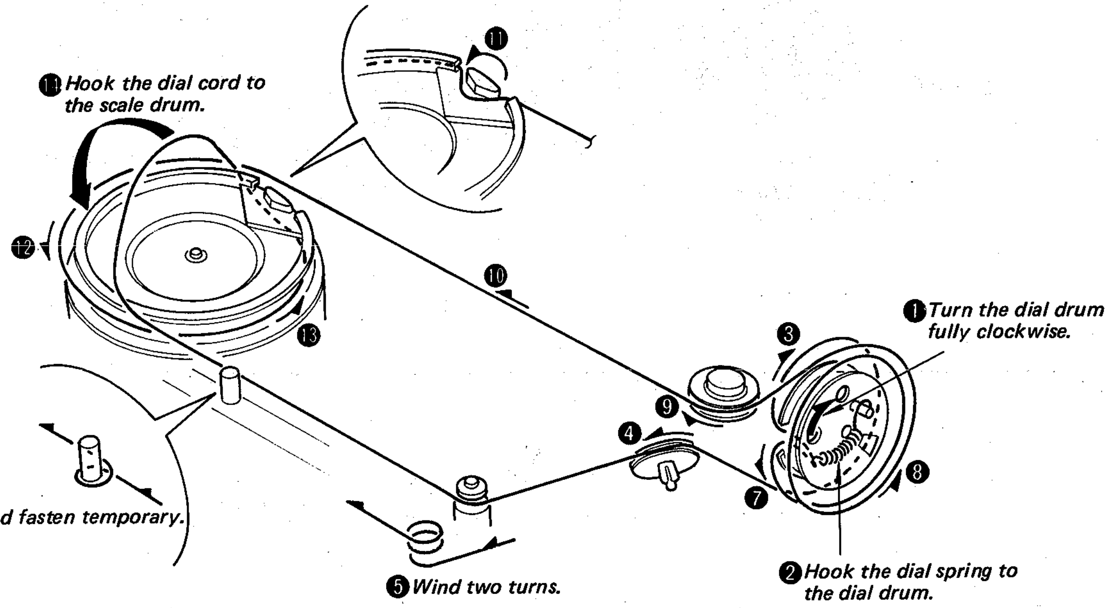
eyelet 2X3
(Crush the eyelet after linking the dial cord.)

② *Link the dial cord to the spring as illustrated.*



2) Stringing

- String the dial cord in the numerical order given.



⑪ *Hook the dial cord to the scale drum.*

① *Turn the dial drum fully clockwise.*

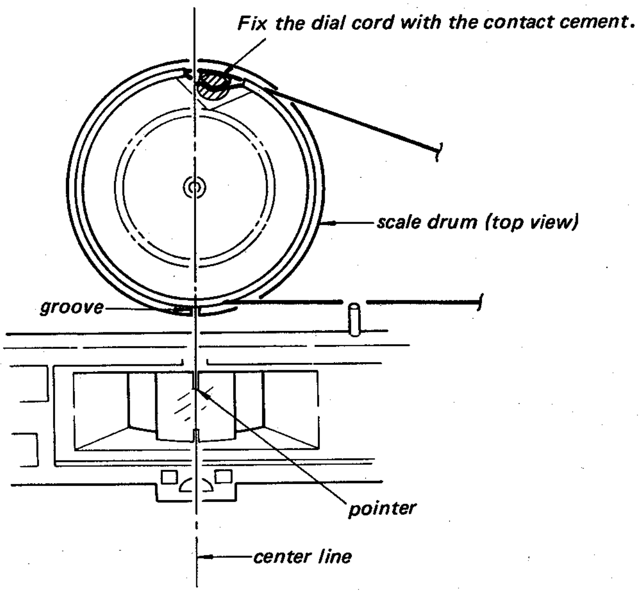
⑥ *Wind and fasten temporary.*

⑤ *Wind two turns.*

② *Hook the dial spring to the dial drum.*

3) Setting

1. *Turn the dial drum fully counterclockwise and turn the scale drum fixing the dial drum by hand.*
   (The dial drum slips.)
2. *Set the groove of the scale drum to the center line.*



Fix the dial cord with the contact cement.

scale drum (top view)
groove
pointer
center line

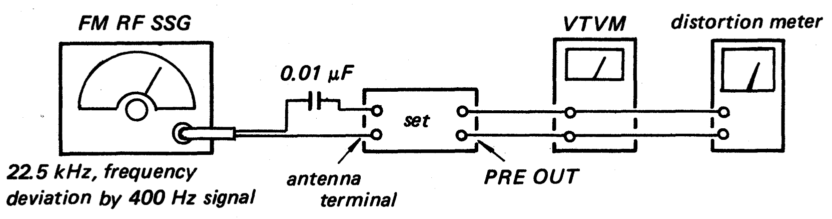
SECTION 3
ADJUSTMENTS

FM

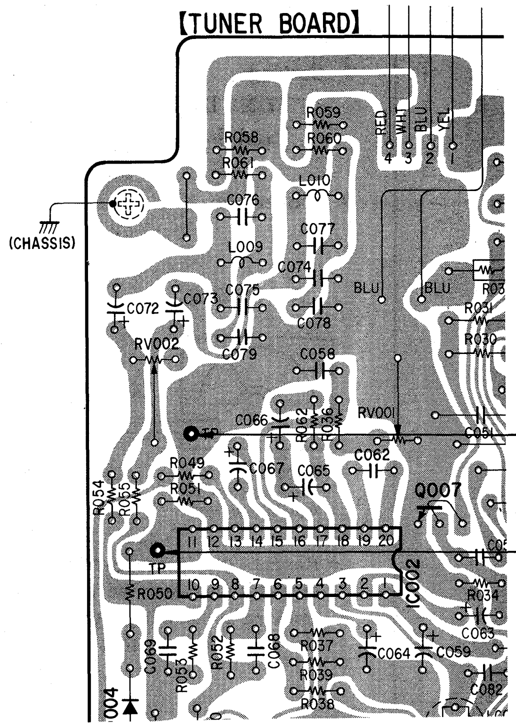
- **Setting:**
  FUNCTION button: TUNER
  Band Switch: FM
  FM MODE Switch: STEREO

Discriminator Adjustment

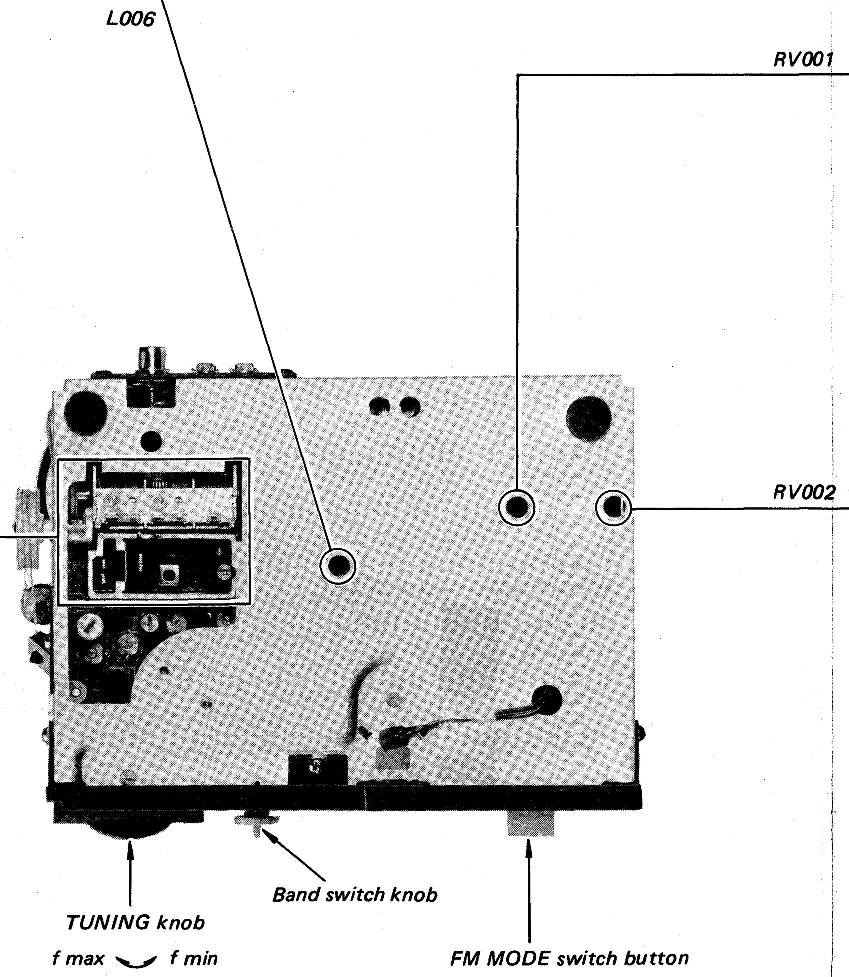
Procedure:


FM RF SSG
VTVM
distortion meter
0.01 μF
set
antenna terminal
PRE OUT
22.5 kHz, frequency deviation by 400 Hz signal

Adjust L006 for the minimum distortion on the distortion meter. (Output level of the signal generator: 60 dB [1mV])


[TUNER BOARD]
(CHASSIS)
R058
R059
R060
R061
L010
L009
C076
C077
C074
C075
C072
C073
C078
C079
RV002
C058
RV001
C066
C067
C065
C062
R049
R051
R054
R055
Q007
TP
R050
IC002
C069
R053
R052
C068
R037
R039
R036
C064
C059
C063
R034
RED
WHT
BLU
YEL
BLU

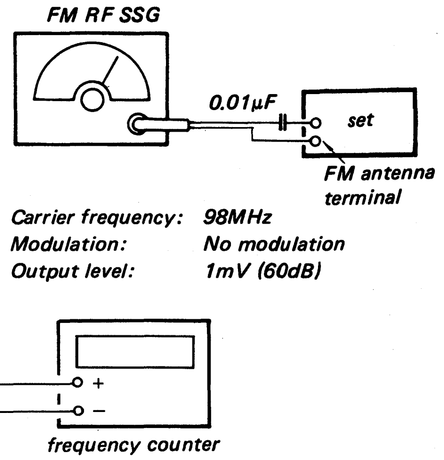
The FM front-end is carefully adjusted at the factory and is supplied as one whole block for replacement.


L006
RV001
RV002
TUNING knob
f max f min
Band switch knob
FM MODE switch button

VCO Adjustment

A) Regular Method

Procedure:


FM RF SSG
0.01μF
set
FM antenna terminal
+
−
frequency counter

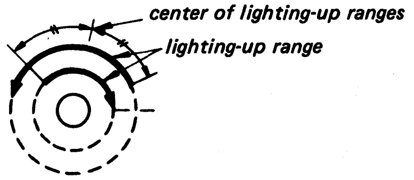
Carrier frequency: *98MHz*
Modulation: *No modulation*
Output level: *1mV (60dB)*

1. Tune the set to 98MHz.
2. Adjust RV001 for 19kHz ±20Hz on the counter.

B) Simple Method

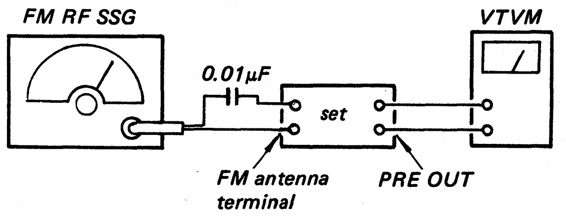
Procedure:

1. Tune the set to the FM stereo broadcasting signal.
2. Turn RV001 clockwise or counterclockwise and memorize the lighting-up range of the stereo lamp.
3. Secure RV001 at the center of the lighting-up range of both turns as shown below.


center of lighting-up ranges
lighting-up range

FM Stereo Separation Adjustment

Procedure:


FM RF SSG
VTVM
0.01μF
set
FM antenna terminal
PRE OUT

Carrier frequency: *98MHz*
Output level: *1mV (60dB)*
Mode: *stereo*
Modulation:
Audio (1kHz): *16.25kHz deviation (40%)*
Pilot (19kHz): *7.5kHz deviation (20%)*
Subchannel (38kHz): *16.25kHz deviation (40%)*

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV002 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV002 for minimum reading.

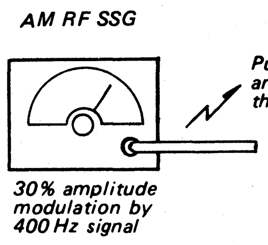
L-CH Stereo Separation: Ⓐ − Ⓑ
R-CH Stereo Separation: Ⓒ − Ⓓ

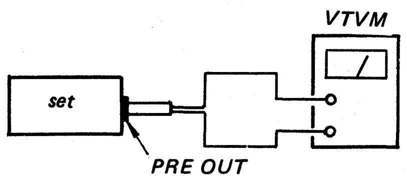
The separations of both channels should be equal.

MW

- **Setting:**
  FUNCTION button: TUNER
  Band Switch: MW

- **Procedure:**


AM RF SSG
Put the lead-wire antenna close to the set.
30% amplitude modulation by 400 Hz signal

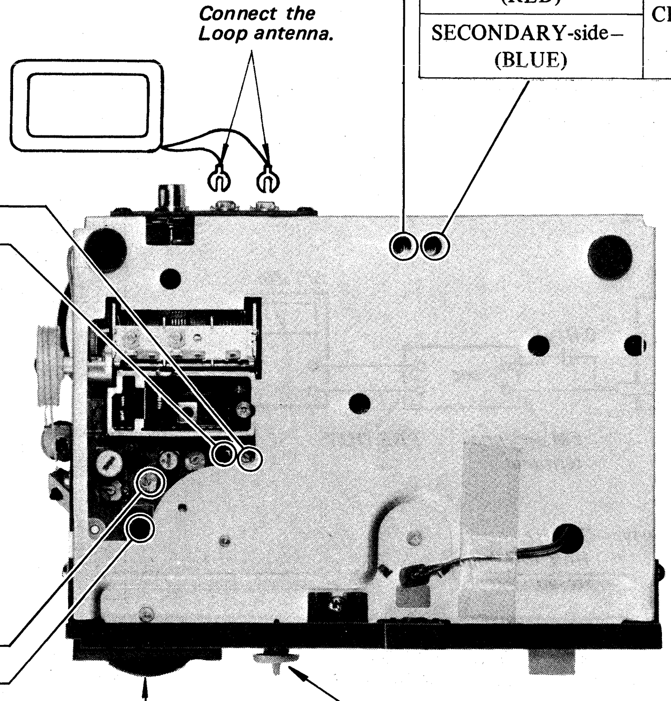

VTVM
set
PRE OUT

- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AM IF ALIGNMENT		
Adjust for a maximum reading on VTVM.		
PRIMARY-side–(RED)	CFU	450 kHz
SECONDARY-side–(BLUE)		

MW FREQUENCY COVERAGE ADJUSTMENT	
CT004	1,660 kHz
L005	515 kHz
Adjust for a maximum reading on VTVM.	

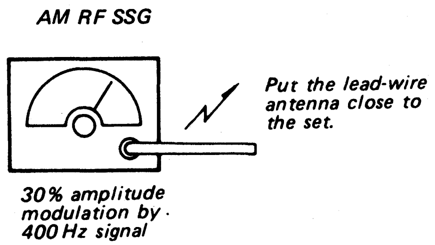
MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT003	1,400 kHz
L004	600 kHz

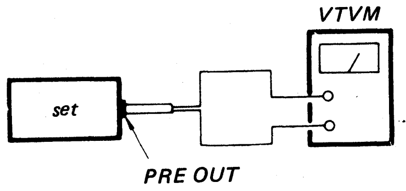

Connect the Loop antenna.
TUNING knob
f max ⌣ f min
Band switch knob

LW

- **Setting:**
  FUNCTION button: TUNER
  Band Switch: LW

- **Procedure:**

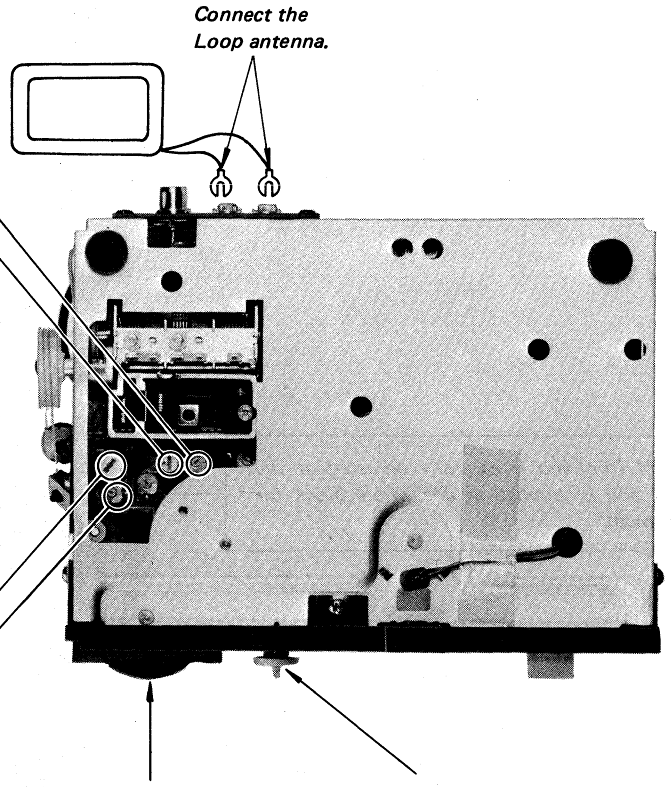

AM RF SSG
Put the lead-wire antenna close to the set.
30% amplitude modulation by 400 Hz signal


VTVM
set
PRE OUT

- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

LW FREQUENCY COVERAGE ADJUSTMENT	
CT006	365 kHz
L008	145 kHz
Adjust for maximum reading on VTVM.	

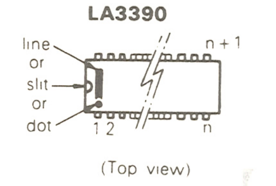
LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L007	170 kHz
CT005	310 kHz

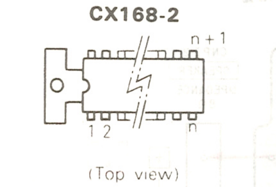

Connect the Loop antenna.
TUNING knob
f max ⌣ f min
Band switch knob

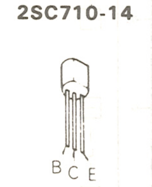
SECTION 4
DIAGRAMS

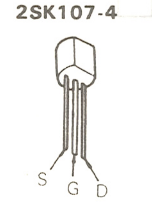
4-1. MOUNTING DIAGRAM
— Tuner section —

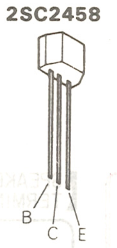
Semiconductor Lead Layouts

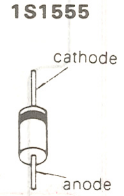

LA3390
line or slit or dot
n+1
1 2
n
(Top view)

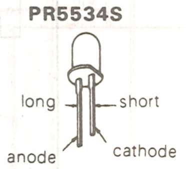

CX168-2
n+1
1 2
n
(Top view)

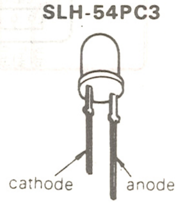

2SC710-14
B C E


2SK107-4
S G D

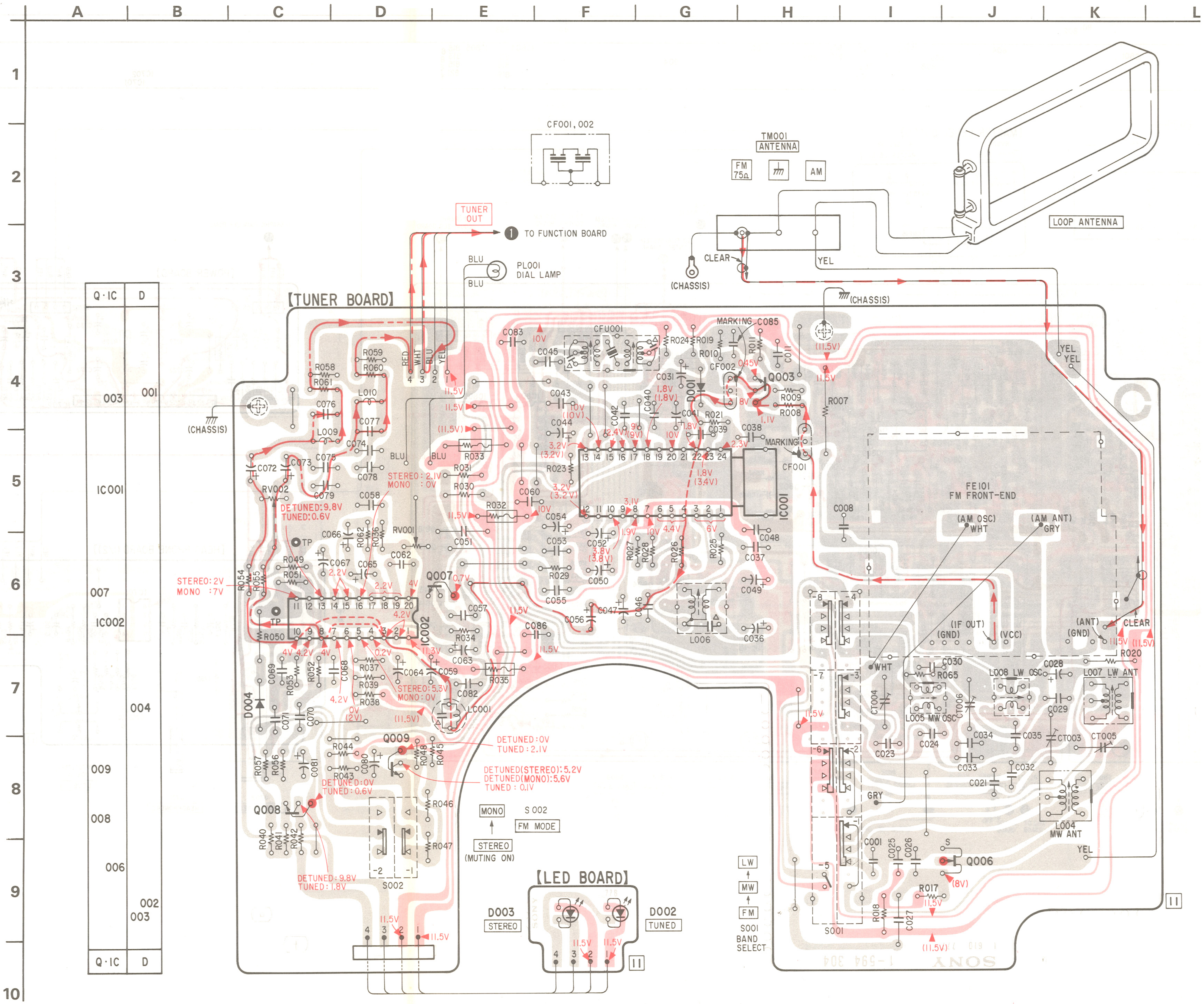

2SC2458
B C E


1S1555
cathode
anode


PR5534S
long
short
anode
cathode


SLH-54PC3
cathode
anode

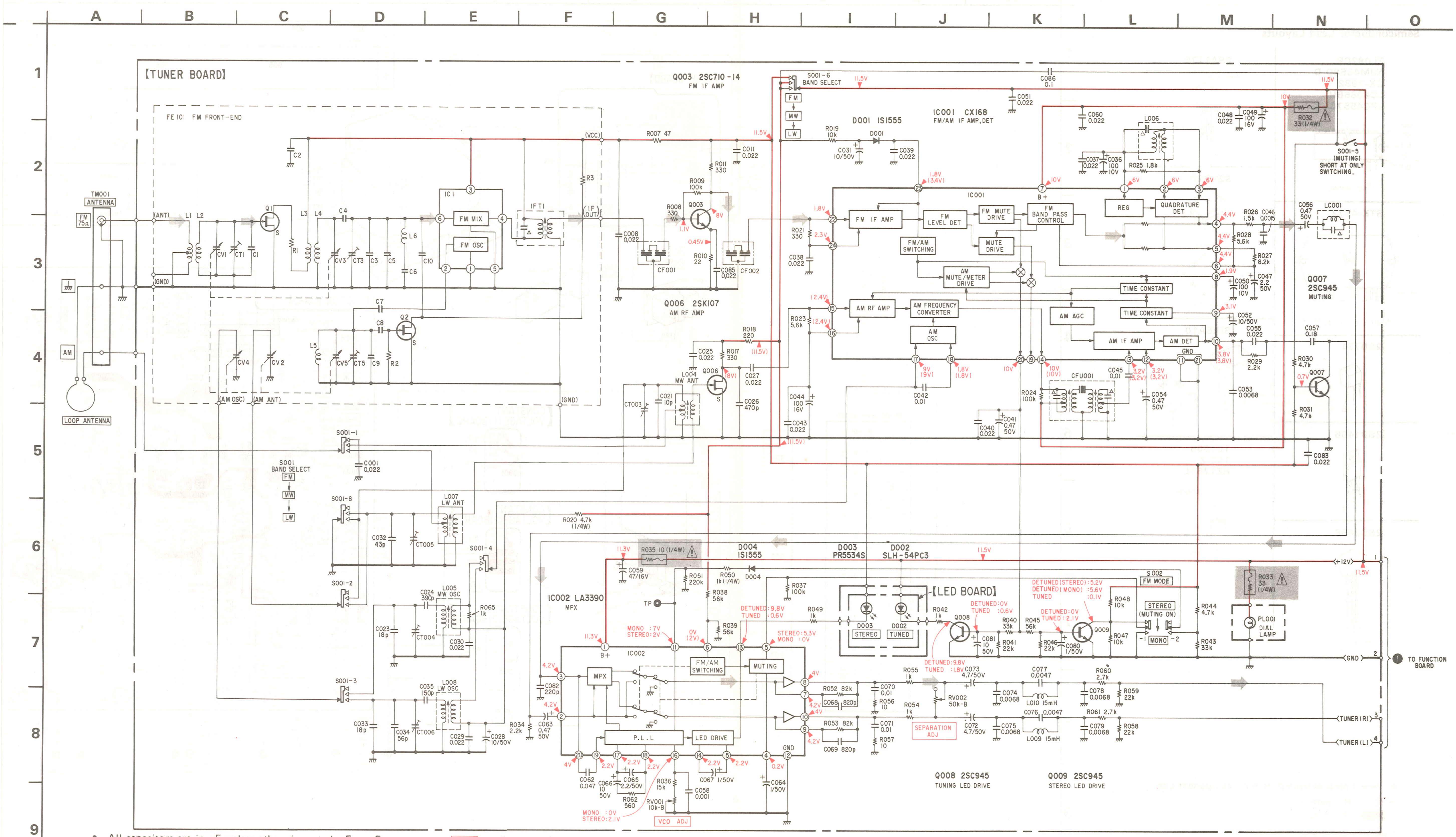
Q·IC	D
003	001
IC001	
007	
IC002	
	004
009	
008	
006	
	002
	003
Q·IC	D


A B C D E F G H I J K L
1 2 3 4 5 6 7 8 9 10
CF001, 002
TM001 ANTENNA
FM 75Ω
AM
LOOP ANTENNA
TUNER OUT
① TO FUNCTION BOARD
BLU
PL001 DIAL LAMP
CLEAR
YEL
(CHASSIS)
【TUNER BOARD】
RED WHT BLU YEL
4 3 2 1
MARKING C085
CFU001
CF002
CF001
Q003
IC001
FE001 FM FRONT-END
(AM OSC) WHT
(AM ANT) GRY
(IF OUT)
(GND)
(VCC)
(ANT)
(GND)
L008 LW OSC
L007 LW ANT
L005 MW OSC
L004 MW ANT
CT003
CT004
CT005
CT006
Q006
S001
RV001
RV002
STEREO: 2.1V MONO: 0V
STEREO: 2V MONO: 7V
DETUNED: 9.8V TUNED: 0.6V
Q007
IC002
Q009
Q008
STEREO: 5.3V MONO: 0V
DETUNED: 0V TUNED: 2.1V
DETUNED(STEREO): 5.2V DETUNED(MONO): 5.6V TUNED: 0.1V
DETUNED: 9.8V TUNED: 1.8V
MONO
S002
FM MODE
STEREO (MUTING ON)
S002
【LED BOARD】
D003 STEREO
D002 TUNED
LW MW FM
S001 BAND SELECT
(11.5V)
(8V)
1-594-304-

- ○— : parts extracted from the component sid
- ▨ : B + pattern
- ━━▶━━ : signal path
- ━━━▶ : L-CH signal path
- ━·━▶ : R-CH signal path

4-2. SCHEMATIC DIAGRAM

— Tuner section —


A
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K
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M
N
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2
3
4
5
6
7
8
9
10
[TUNER BOARD]
FE101 FM FRONT-END
TM001 ANTENNA
FM 75Ω
AM
LOOP ANTENNA
(ANT)
(GND)
(VCC)
(IF OUT)
IC1
FM MIX
FM OSC
IFT1
(AM OSC)
(AM ANT)
Q003 2SC710-14
FM IF AMP
Q006 2SK107
AM RF AMP
L004 MW ANT
CF001
CF002
CT003
S001-6 BAND SELECT
FM
MW
LW
D001 1S1555
IC001 CX168
FM/AM IF AMP, DET
FM IF AMP
FM LEVEL DET
FM MUTE DRIVE
FM BAND PASS CONTROL
REG
QUADRATURE DET
FM/AM SWITCHING
MUTE DRIVE
AM MUTE/METER DRIVE
TIME CONSTANT
AM RF AMP
AM FREQUENCY CONVERTER
AM OSC
AM AGC
AM IF AMP
AM DET
GND
CFU001
L006
LC001
Q007 2SC945
MUTING
S001-5 (MUTING) SHORT AT ONLY SWITCHING.
R032 33(1/4W)
S001-1
S001 BAND SELECT
S001-8
L007 LW ANT
CT005
S001-4
S001-2
L005 MW OSC
S001-3
L008 LW OSC
CT004
CT006
R020 4.7k (1/4W)
R035 10(1/4W)
D004 1S1555
D003 PR5534S
D002 SLH-54PC3
IC002 LA3390
MPX
TP
MPX
FM/AM SWITCHING
MUTING
P.L.L
LED DRIVE
MONO: 7V
STEREO: 2V
MONO: 0V
STEREO: 2.1V
VCO ADJ
[LED BOARD]
STEREO
TUNED
DETUNED: 9.8V
TUNED: 0.6V
STEREO: 5.3V
MONO: 0V
DETUNED(STEREO): 5.2V
DETUNED(MONO): 5.6V
TUNED: 0.1V
S002 FM MODE
STEREO (MUTING ON)
MONO
R033 33 (1/4W)
PL001 DIAL LAMP
RV002 50k-B
SEPARATION ADJ
L010 15mH
L009 15mH
Q008 2SC945
TUNING LED DRIVE
Q009 2SC945
STEREO LED DRIVE
(+12V)
(GND)
(TUNER(R))
(TUNER(L))
TO FUNCTION BOARD
11.5V

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼W, ⅙W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- ─▭─ : fusible resistor.
- △ : internal component.
- ▭ : panel designation.

- ▭ : adjustment for repair.
- ── : B+ bus.
- Readings are taken under no-signal conditions with a VOM (50kΩ/V).
  No mark : FM
  ( ) : AM
- ➡ : signal path

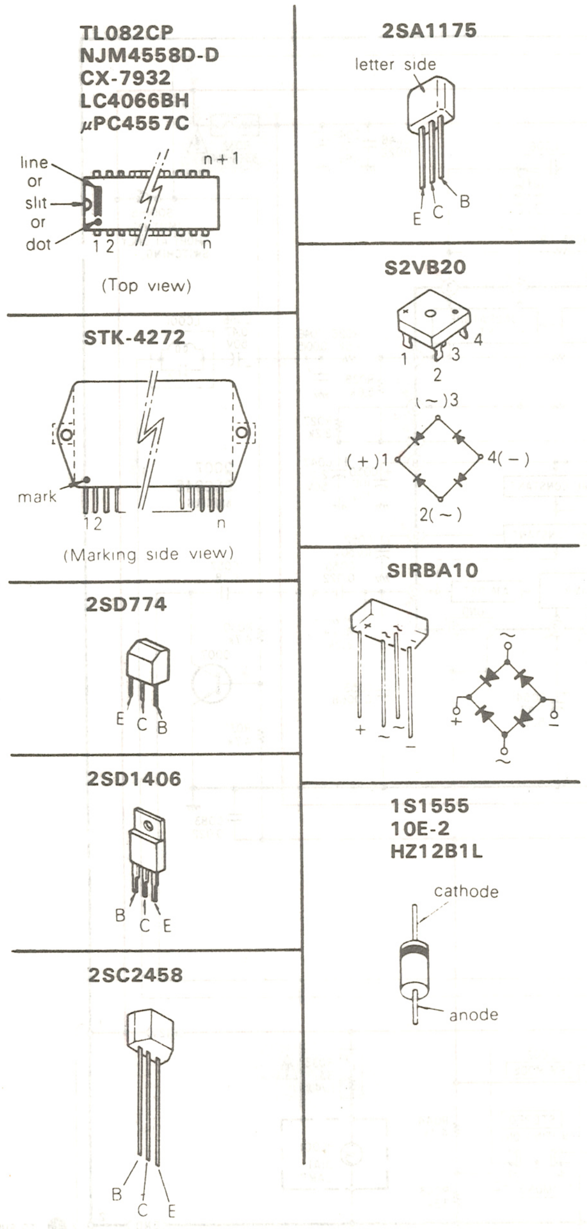
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

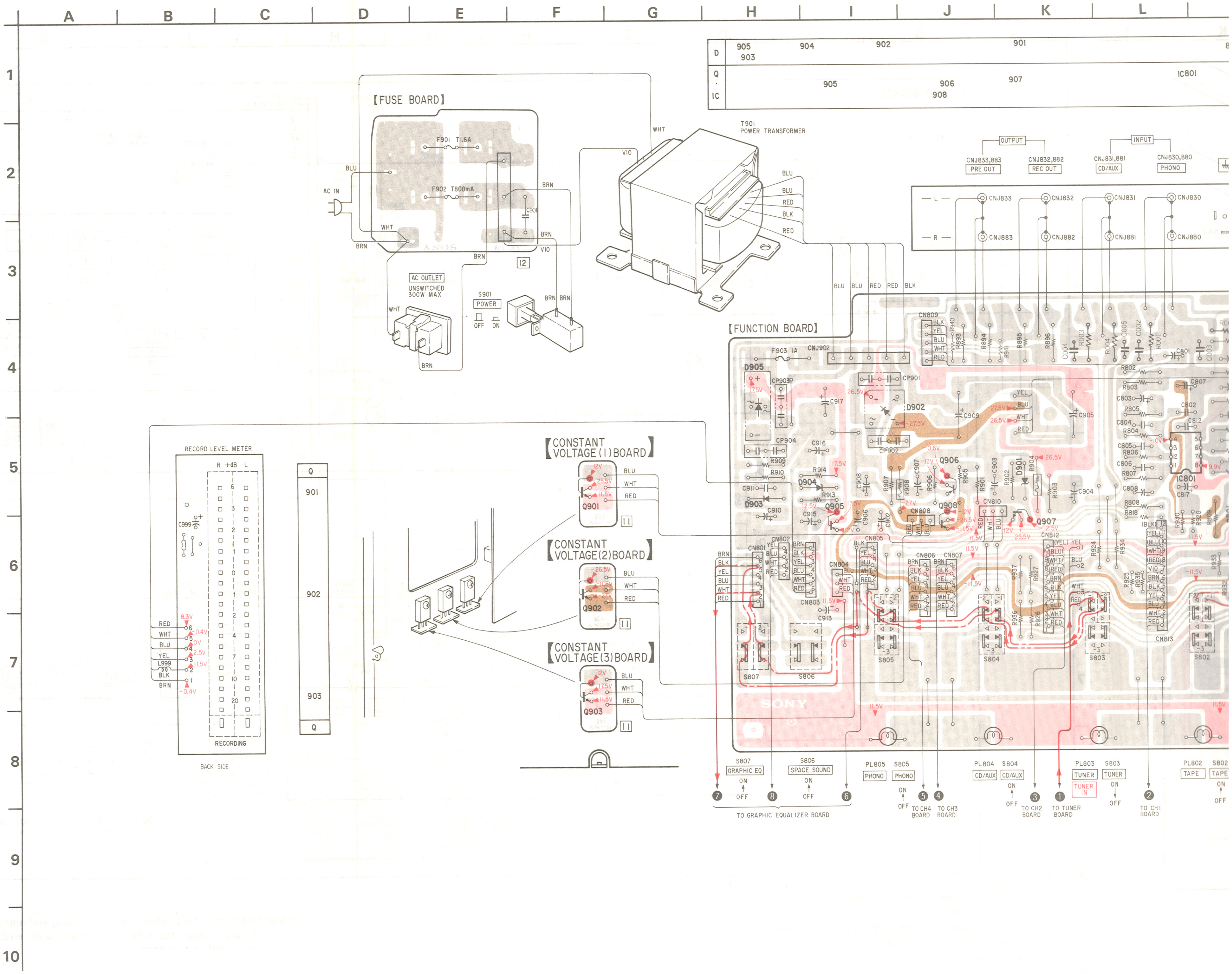
Note: Voltages are measured with a VOM (50kΩ/V).

4-3. MOUNTING DIAGRAM

— Function section —

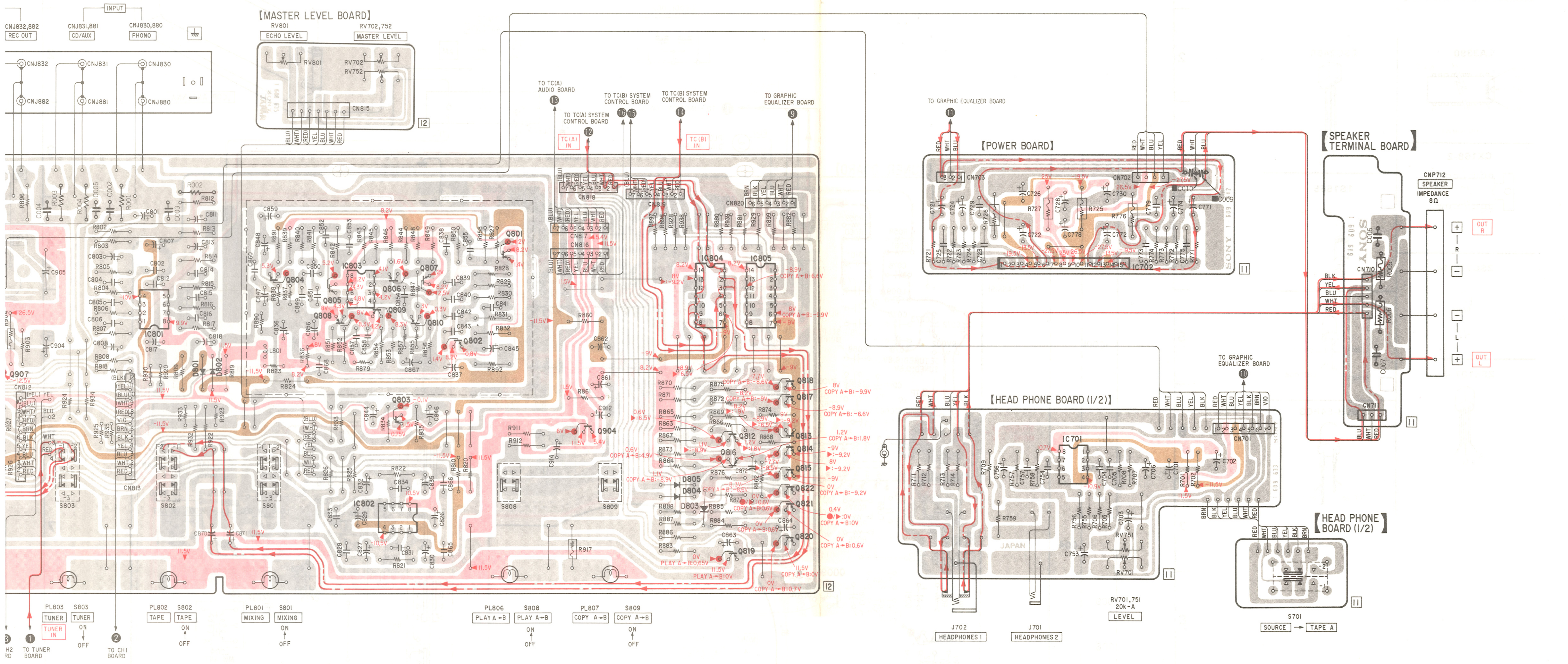
Semiconductor Lead Layouts


TL082CP
NJM4558D-D
CX-7932
LC4066BH
μPC4557C
line or slit or dot
n+1
1 2
n
(Top view)
2SA1175
letter side
E C B
S2VB20
1 2 3 4
(~)3
(+)1
4(–)
2(~)
STK-4272
mark
1 2
n
(Marking side view)
SIRBA10
2SD774
E C B
2SD1406
B C E
1S1555
10E-2
HZ12B1L
cathode
anode
2SC2458
B C E


A
B
C
D
E
F
G
H
I
J
K
L
1
2
3
4
5
6
7
8
9
10
D 905 903 904 902 901
Q
IC 905 906 908 907 IC801
[FUSE BOARD]
F901 T1.6A
F902 T800mA
AC IN
C901
T901 POWER TRANSFORMER
AC OUTLET UNSWITCHED 300W MAX
S901 POWER
OFF ON
OUTPUT
INPUT
CNJ833,883 PRE OUT
CNJ832,882 REC OUT
CNJ831,881 CD/AUX
CNJ830,880 PHONO
[FUNCTION BOARD]
F903 1A
CNJ902
RECORD LEVEL METER
R +dB L
RECORDING
BACK SIDE
C999
L999
[CONSTANT VOLTAGE(1)BOARD]
Q901
[CONSTANT VOLTAGE(2)BOARD]
Q902
[CONSTANT VOLTAGE(3)BOARD]
Q903
Q 901 902 903 Q
D905 D902 D904 D903 Q906 Q904 Q905 Q908 Q907 D901
IC801
SONY
S807 GRAPHIC EQ
S806 SPACE SOUND
PL805 S805 PHONO PHONO
PL804 S804 CD/AUX CD/AUX
PL803 S803 TUNER TUNER
PL802 S802 TAPE TAPE
ON OFF
TO GRAPHIC EQUALIZER BOARD
TO CH4 BOARD
TO CH3 BOARD
TO CH2 BOARD
TO TUNER BOARD
TO CH1 BOARD
⑦ ⑧ ⑥ ⑤ ④ ③ ① ②

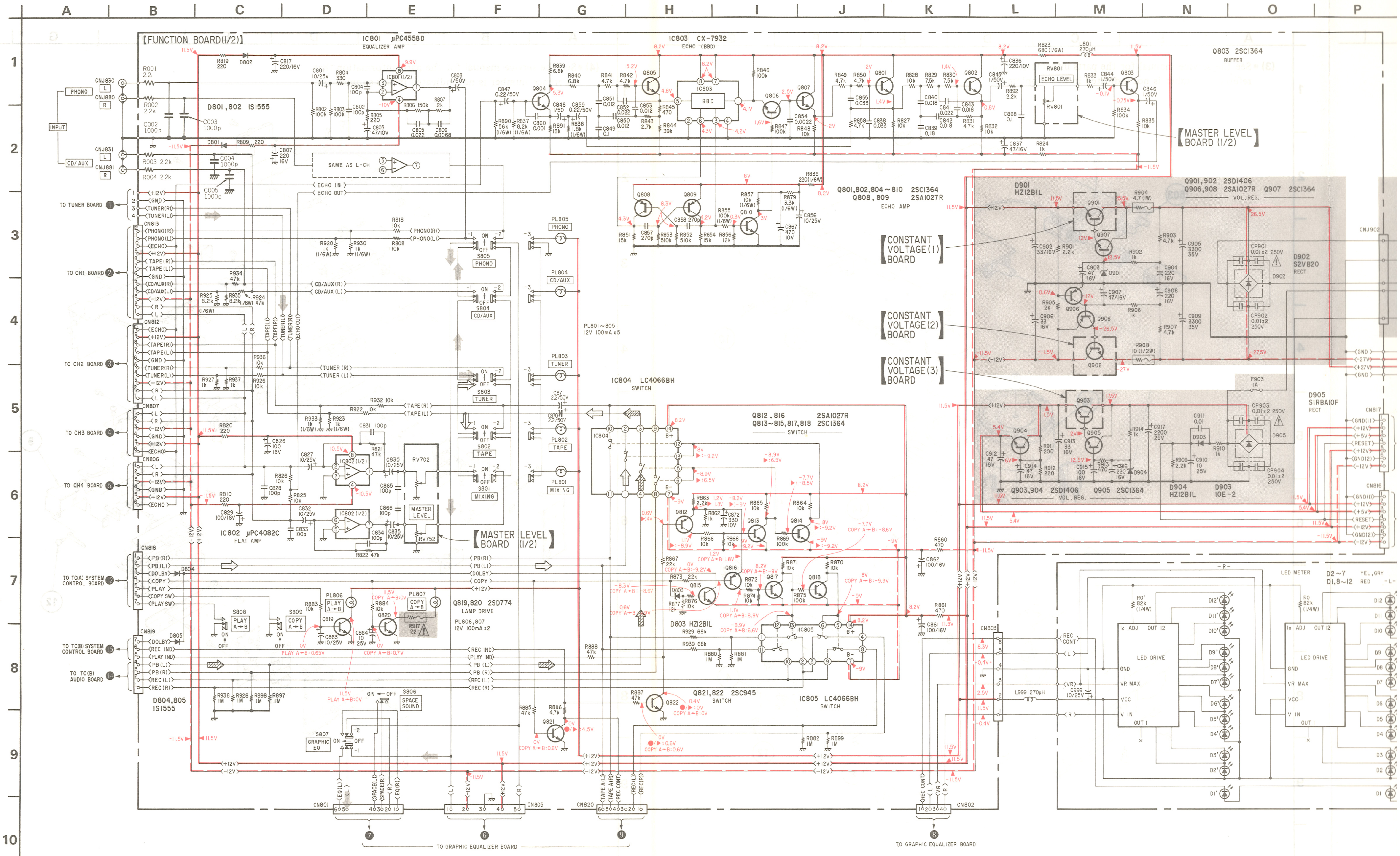
- ○— : parts extracted from the component side.
- ▨ : B + pattern
- ▨ : B – pattern
- ━━➡━━ : signal path
- ━━━➡ : L-CH signal path
- ━━━➡ : R-CH signal path

	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A1
D			801 802					805 804	803								
Q · IC		IC801		804 805 808	IC803 809 806 803 IC802 807 810	802 801	904	IC804	812 816 819 IC805 818 813 815 821 817 814 822 820			IC702 IC701					


INPUT
CNJ832,882
REC OUT
CNJ831,881
CD/AUX
CNJ830,880
PHONO
CNJ832
CNJ831
CNJ830
CNJ882
CNJ881
CNJ880
【MASTER LEVEL BOARD】
RV801
ECHO LEVEL
RV702,752
MASTER LEVEL
RV801
RV702
RV752
CN815
12
TO TC(A) AUDIO BOARD
13
TO TC(A) SYSTEM CONTROL BOARD
12
TO TC(B) SYSTEM CONTROL BOARD
16 15
TO TC(B) SYSTEM CONTROL BOARD
14
TO GRAPHIC EQUALIZER BOARD
9
TC(A) IN
TC(B) IN
CN818
CN819
CN817
CN816
CN820
IC801
IC802
IC803
IC804
IC805
Q801
Q802
Q803
Q804
Q805
Q806
Q807
Q808
Q809
Q810
Q812
Q813
Q814
Q815
Q816
Q817
Q818
Q819
Q820
Q821
Q822
Q904
Q907
D801
D802
D804
D805
CNJ812
CNJ813
S803
S802
S801
S808
S809
12
TO GRAPHIC EQUALIZER BOARD
11
【POWER BOARD】
CN703
CN702
IC702
11
【SPEAKER TERMINAL BOARD】
CNP712
SPEAKER
IMPEDANCE
8Ω
CN710
CN711
OUT R
OUT L
R
L
11
TO GRAPHIC EQUALIZER BOARD
10
【HEAD PHONE BOARD (1/2)】
IC701
CN701
RV751
RV701
JAPAN
11
【HEAD PHONE BOARD (1/2)】
11
PL803
S803
TUNER
TUNER
TUNER IN
ON
OFF
PL802
S802
TAPE
TAPE
ON
OFF
PL801
S801
MIXING
MIXING
ON
OFF
1
TO TUNER BOARD
2
TO CH1 BOARD
PL806
S808
PLAY A→B
PLAY A→B
ON
OFF
PL807
S809
COPY A→B
COPY A→B
ON
OFF
J702
HEADPHONES 1
J701
HEADPHONES 2
RV701,751
20k-A
LEVEL
S701
SOURCE → TAPE A

4-4. SCHEMATIC DIAGRAM

— Function section —


A
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P
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4
5
6
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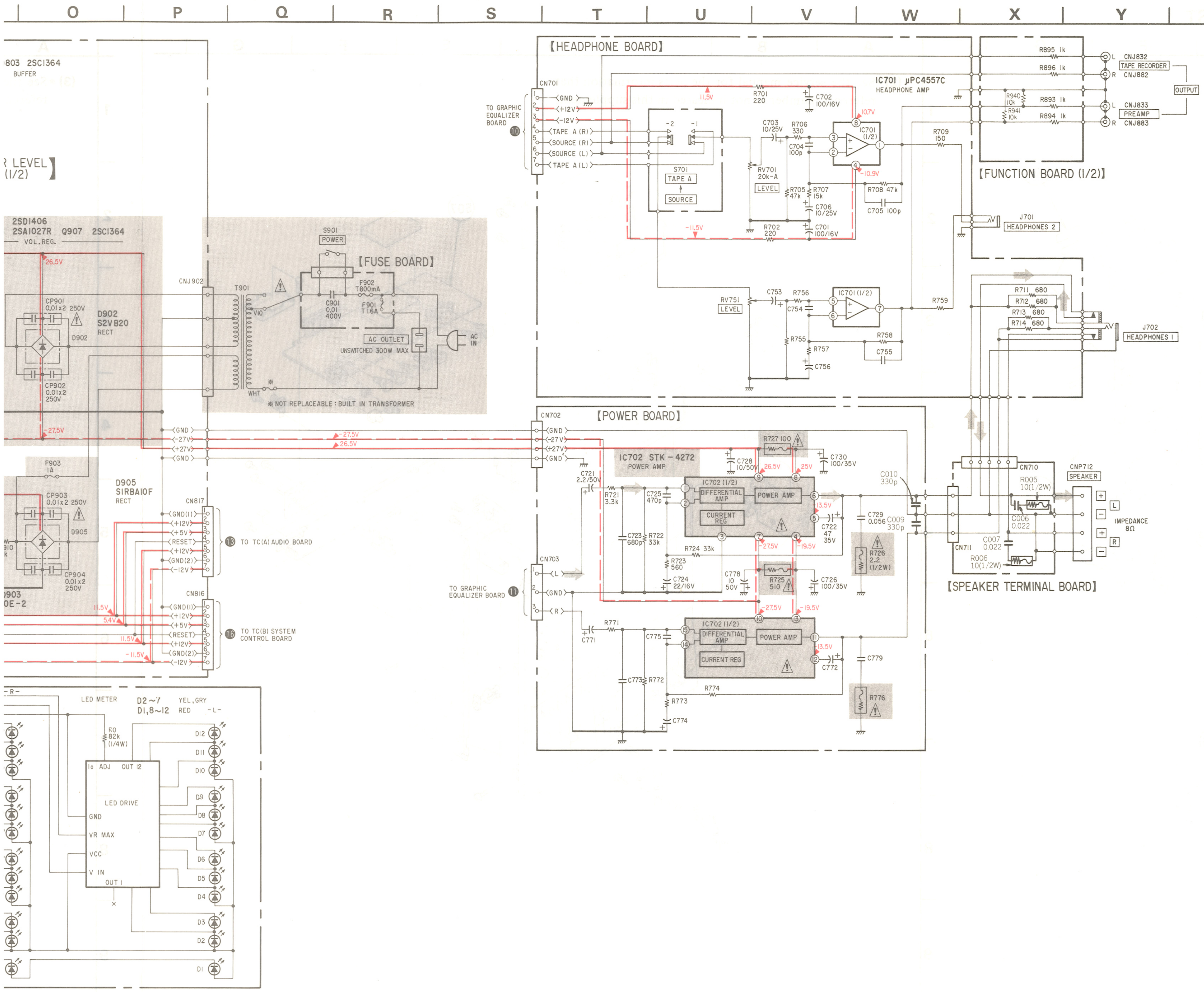
10
[FUNCTION BOARD(1/2)]
IC801 μPC4558D
EQUALIZER AMP
IC803 CX-7932
ECHO (BBD)
Q803 2SC1364
BUFFER
PHONO
INPUT
CD/AUX
CNJ830
CNJ880
CNJ831
CNJ881
D801,802 1S1555
SAME AS L-CH
ECHO IN
ECHO OUT
MASTER LEVEL BOARD (1/2)
Q801,802,804~810 2SC1364
Q808,809 2SA1027R
ECHO AMP
TO TUNER BOARD ①
TO CH1 BOARD ②
TO CH2 BOARD ③
TO CH3 BOARD ④
TO CH4 BOARD ⑤
CN813
CN812
CN807
CN806
S805 PHONO
S804 CD/AUX
S803 TUNER
S802 TAPE
S801 MIXING
PL805 PHONO
PL804 CD/AUX
PL803 TUNER
PL802 TAPE
PL801 MIXING
PL801~805 12V 100mA x 5
D901 HZ12BIL
Q901,902 2SD1406
Q906,908 2SA1027R
Q907 2SC1364
VOL. REG.
CONSTANT VOLTAGE (1) BOARD
CONSTANT VOLTAGE (2) BOARD
CONSTANT VOLTAGE (3) BOARD
D902 S2VB20 RECT
CNJ902
IC804 LC4066BH
SWITCH
Q812,816 2SA1027R
Q813~815,817,818 2SC1364
SWITCH
IC802 μPC4082C
FLAT AMP
RV702
MASTER LEVEL
RV752
MASTER LEVEL BOARD (1/2)
Q903,904 2SD1406
VOL. REG.
Q905 2SC1364
D904 HZ12BIL
D903 10E-2
D905 S1RBA10F RECT
F903 1A
CN817
CN816
TO TC(A) SYSTEM CONTROL BOARD ⑫
CN818
TO TC(B) SYSTEM CONTROL BOARD ⑬
TO TC(B) AUDIO BOARD ⑭
CN819
D804,805 1S1555
S808 PLAY A→B
S809 COPY A→B
PL806 PLAY A→B
PL807 COPY A→B
Q819,820 2SD774
LAMP DRIVE
PL806,807 12V 100mA x2
D803 HZ12BIL
IC805 LC4066BH
SWITCH
Q821,822 2SC945
SWITCH
S806 SPACE SOUND
S807 GRAPHIC EQ
CN801
CN805
CN820
CN802
CN803
TO GRAPHIC EQUALIZER BOARD
LED METER
D2~7 D1,8~12 YEL, GRY RED
LED DRIVE
L999 270μH
⑦
⑥
⑨
⑧


O
P
Q
R
S
T
U
V
W
X
Y
Z
A1
B1
C1
D1
[HEADPHONE BOARD]
[FUNCTION BOARD (1/2)]
[FUSE BOARD]
[POWER BOARD]
[SPEAKER TERMINAL BOARD]
IC701 μPC4557C HEADPHONE AMP
IC702 STK-4272 POWER AMP
DIFFERENTIAL AMP
POWER AMP
CURRENT REG
S701 TAPE A SOURCE
RV701 20k-A LEVEL
RV751 LEVEL
J701 HEADPHONES 2
J702 HEADPHONES 1
CNJ832 TAPE RECORDER
CNJ833 PREAMP
OUTPUT
S901 POWER
F902 T800mA
F901 T1.6A
T901
AC OUTLET UNSWITCHED 300W MAX
AC IN
※ NOT REPLACEABLE : BUILT IN TRANSFORMER
2SD1406 2SA1027R Q907 2SC1364 VOL.REG.
D902 S2VB20 RECT
D905 SIRBA10F RECT
F903 1A
TO TC(A) AUDIO BOARD
TO TC(B) SYSTEM CONTROL BOARD
TO GRAPHIC EQUALIZER BOARD
LED METER
LED DRIVE
IMPEDANCE 8Ω
CNP712 SPEAKER

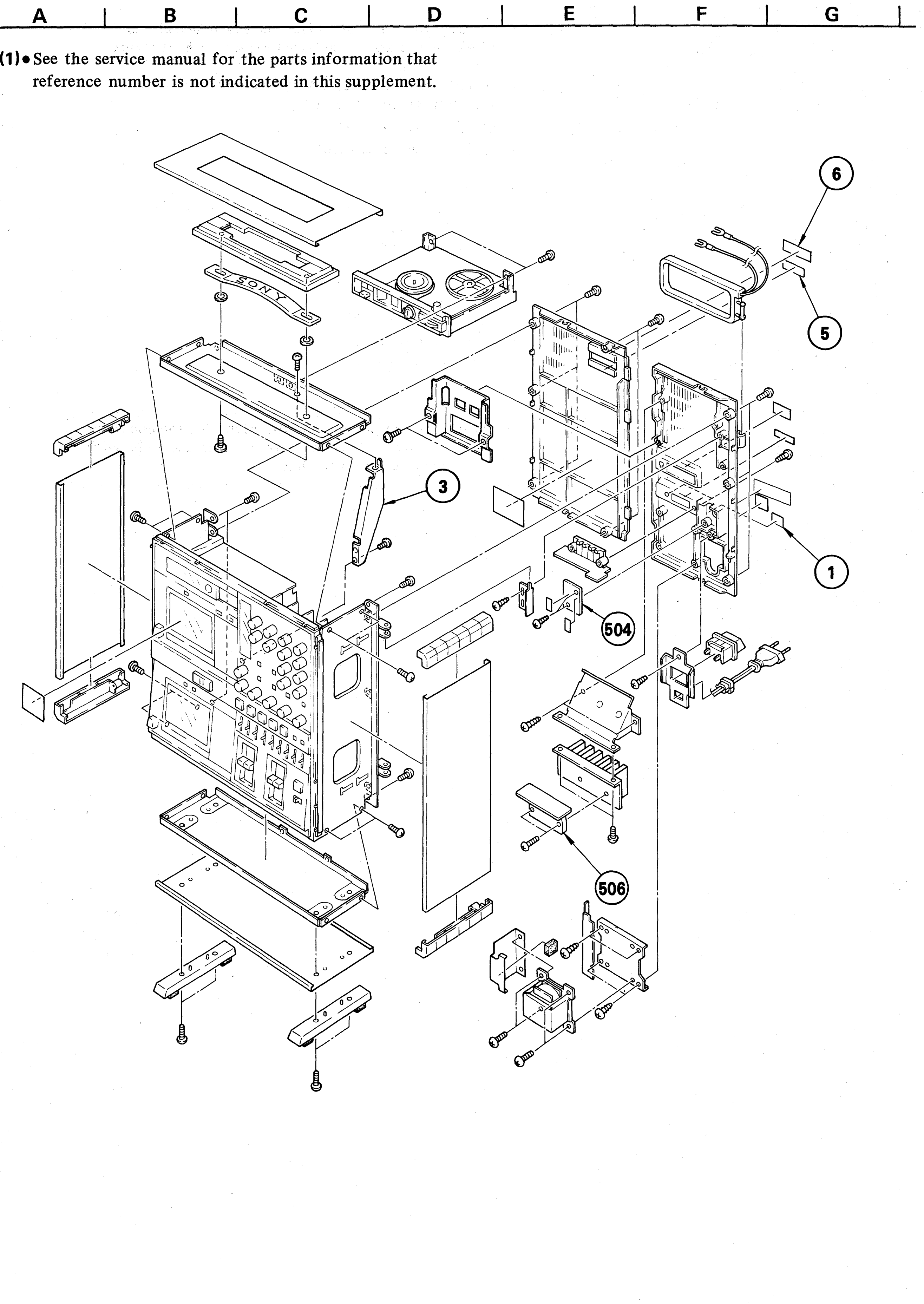
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4 W, 1/6 W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- ⊶ : fusible resistor.
- ▭ : panel designation.
- —— : B+ bus.
- - - - : B− bus.
- Readings are taken under no-signal conditions with a VOM (50kΩ/V).
  No mark : STOP
  ▶ : FWD } DECK B
  ●/▶ : REC FWD } DECK B
- ⇨ : FM signal path
- ⇨ : TC-A signal path
- ▨ : TC-B signal path

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Voltages are measured with a VOM (50kΩ/V).

SECTION 5
EXPLODED VIEWS AND PARTS LIST

(1) • See the service manual for the parts information that reference number is not indicated in this supplement.


A
B
C
D
E
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G
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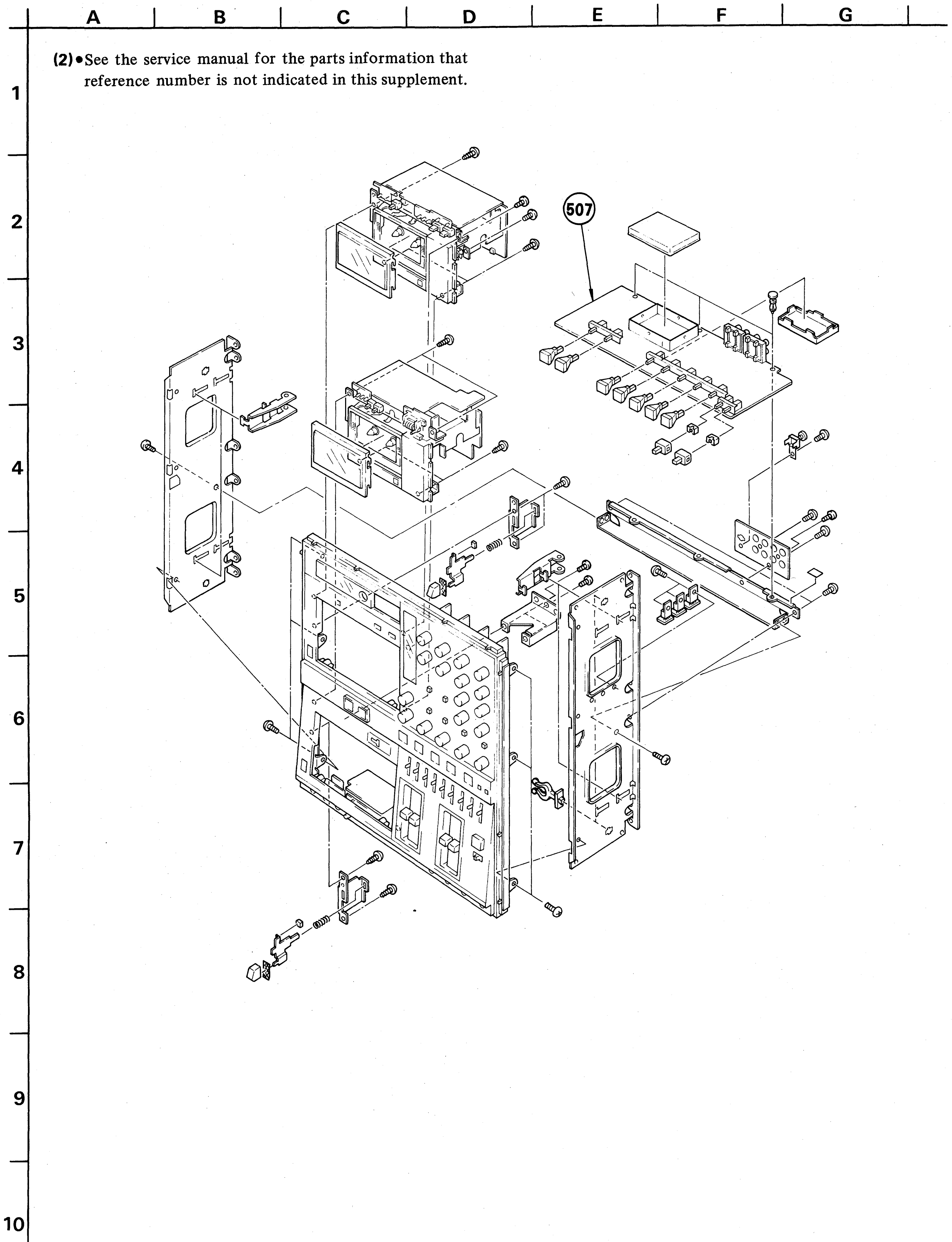
7
8
9
10
6
5
3
1
504
506

(2) • See the service manual for the parts information that reference number is not indicated in this supplement.


A
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C
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G
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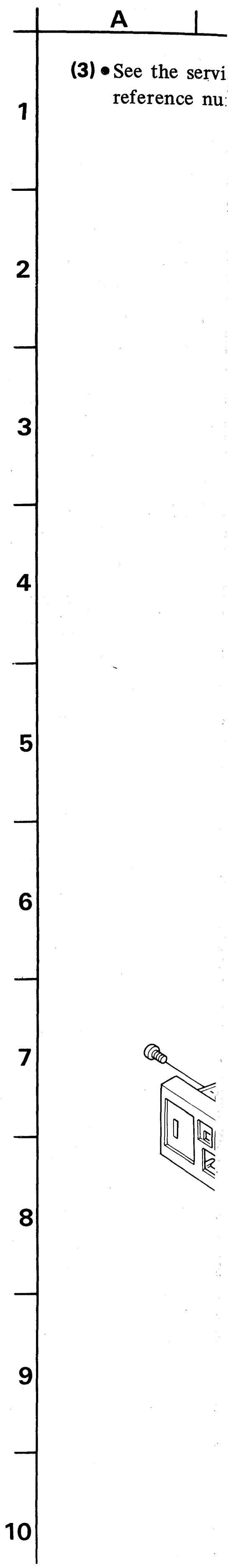
9
10
507

(3) • See the servi
reference nu


A
1
2
3
4
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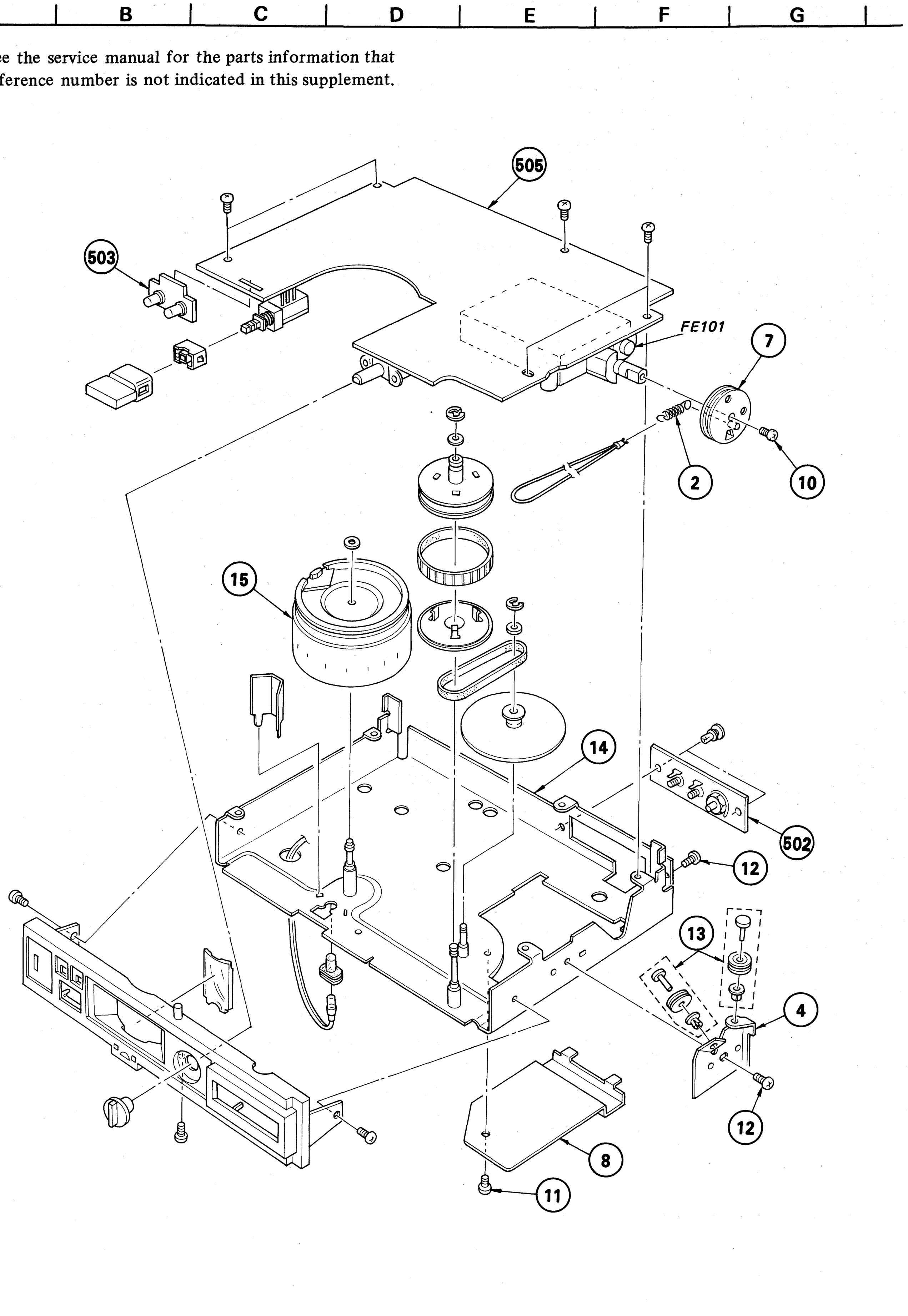
9
10

(3) • See the service manual for the parts information that reference number is not indicated in this supplement.


A
B
C
D
E
F
G
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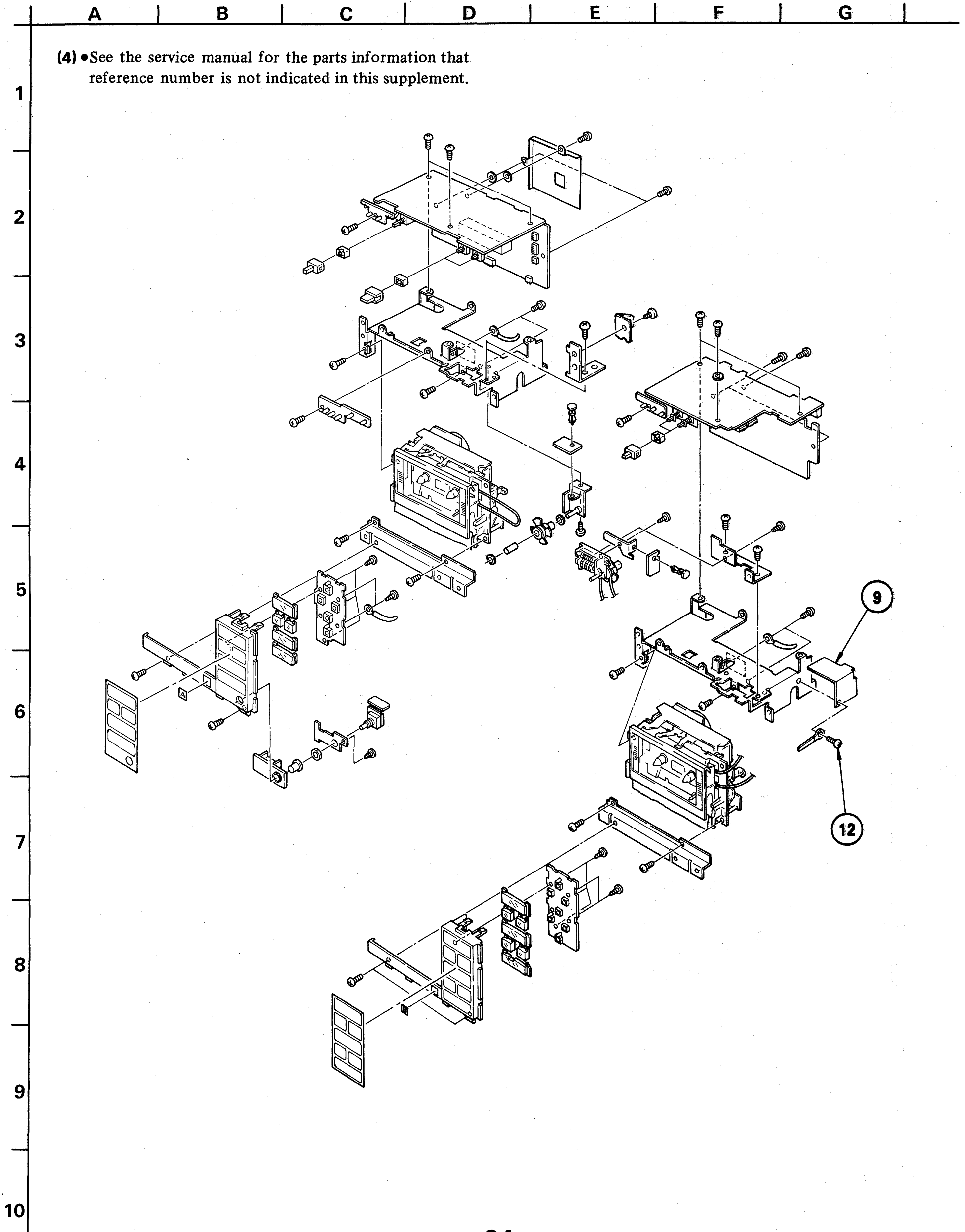
2
3
4
5
6
7
8
9
10
505
503
FE101
7
2
10
15
14
502
12
13
4
12
8
11

(4) •See the service manual for the parts information that reference number is not indicated in this supplement.


A
B
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- See the service manual for the parts information not contained in this supplement.

GENERAL SECTION

No.	Part No.	Description
1	♠;3-703-586-11	LABEL, FTZ (21585S) (LARGE)
2	4-844-416-00	SPRING, TENSION
3	♠;4-887-622-11	REINFORCEMENT (D), FRONT PANEL
4	♠;4-887-646-00	BRACKET, PULLEY
5	4-887-647-00	LABEL, CONNECTION LOOP ANTENNA
6	4-887-648-00	SHEET, INSTRUCTION, ANTENNA
7	4-887-649-00	DRUM, DIAL
8	♠;4-887-650-00	PLATE, SHIELD (G)
9	♠;4-887-651-00	PLATE, SHIELD, CASSETTE
10	7-621-775-10	SCREW +B 2.6X4
11	7-685-870-09	SCREW +BVTT 3X5 (S)
12	7-685-871-01	SCREW +BVTT 3X6 (S)
13	X-4864-705-0	PULLEY ASSY
14	♠;X-4887-531-0	FRAME ASSY, TUNER
15	X-4887-532-1	DRUM, SCALE ASSY

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
31	3-701-360-00	LABEL, TACK
32	3-701-630-00	BAG, POLYETHYLENE
33	3-773-338-11	MANUAL, INSTRUCTION
34	3-795-700-10	INSTRUCTION
35	4-885-192-00	SHEET, PROTECTION
36	4-887-625-11	BAG, PROTECTION
37	4-887-628-00	CUSHION, UPPER
38	4-887-629-00	CUSHION, LOWER
39	4-887-630-00	COVER, DUST
40	4-887-640-00	INDIVIDUAL CARTON
41	X-3701-105-0	ROD ASSY, CLEANING, HEAD

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
501	....				
502	1-536-733-00	TERMINAL BOARD, ANTENNA			
503	♠;1-610-778-00	PC BOARD, LED			
504	♠;1-610-779-00	PC BOARD, FUSE			
505	♠;A-4351-361-A	MOUNTED PCB, TUNER			
506	♠;A-4388-357-A	MOUNTED PCB, POWER			
507	♠;A-4409-791-A	MOUNTED PCB, FUNCTION			
C001	1-101-005-00	CERAMIC	0.022MF		50V
C002	1-102-074-00	CERAMIC	0.001MF	10%	50V
C003	1-102-074-00	CERAMIC	0.001MF	10%	50V
C004	1-102-074-00	CERAMIC	0.001MF	10%	50V
C005	1-102-074-00	CERAMIC	0.001MF	10%	50V
C006	1-101-005-00	CERAMIC	0.022MF		50V
C007	1-101-005-00	CERAMIC	0.022MF		50V
C008	1-101-005-00	CERAMIC	0.022MF		50V
C009	1-102-112-00	CERAMIC	330PF	10%	50V
C010	1-102-112-00	CERAMIC	330PF	10%	50V
C011	1-101-005-00	CERAMIC	0.022MF		50V
C021	1-102-947-00	CERAMIC	10PF	5%	50V
C023	1-102-294-00	CERAMIC	18PF	5%	50V
C024	1-104-067-00	POLYSTYRENE	390PF	5%	50V
C025	1-101-005-00	CERAMIC	0.022MF		50V
C026	1-102-824-00	CERAMIC	430PF	5%	50V
C027	1-101-005-00	CERAMIC	0.022MF		50V
C028	1-123-356-00	ELECT	10MF	20%	50V
C029	1-101-005-00	CERAMIC	0.022MF		50V
C030	1-101-005-00	CERAMIC	0.022MF		50V
C031	1-123-356-00	ELECT	10MF	20%	50V
C032	1-102-966-00	CERAMIC	43PF	5%	50V
C033	1-102-953-00	CERAMIC	18PF	5%	50V
C034	1-101-884-00	CERAMIC	56PF	5%	50V
C035	1-104-057-00	POLYSTYRENE	150PF	5%	50V
C036	1-123-474-00	ELECT	100MF	20%	10V
C037	1-101-005-00	CERAMIC	0.022MF		50V
C038	1-101-005-00	CERAMIC	0.022MF		50V
C039	1-101-005-00	CERAMIC	0.022MF		50V
C040	1-101-005-00	CERAMIC	0.022MF		50V
C041	1-123-351-00	ELECT	0.47MF	20%	50V
C042	1-101-004-00	CERAMIC	0.01MF		50V
C043	1-101-005-00	CERAMIC	0.022MF		50V
C044	1-123-484-00	ELECT	100MF	20%	16V
C045	1-101-004-00	CERAMIC	0.01MF		50V
C046	1-102-119-00	CERAMIC	0.0015MF	10%	50V
C047	1-123-353-00	ELECT	2.2MF	20%	50V
C048	1-101-005-00	CERAMIC	0.022MF		50V
C049	1-123-484-00	ELECT	100MF	20%	16V
C050	1-123-474-00	ELECT	100MF	20%	10V

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
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ELECTRICAL PARTS

Ref.No.	Part No.	Description				
C051	1-161-494-00	CERAMIC	0.022MF	30%	25V	
C052	1-123-356-00	ELECT	10MF	20%	50V	
C053	1-130-481-00	MYLAR	0.0068MF	5%	50V	
C054	1-123-351-00	ELECT	0.47MF	20%	50V	
C055	1-130-624-00	FILM	0.022MF	5%	50V	
C056	1-123-351-00	ELECT	0.47MF	20%	50V	
C057	1-130-635-00	FILM	0.018MF	5%	50V	
C058	1-104-077-00	POLYSTYRENE	0.001MF	5%	50V	
C059	1-123-319-00	ELECT	47MF	20%	16V	
C060	1-101-005-00	CERAMIC	0.022MF		50V	
C062	1-130-491-00	MYLAR	0.047MF	5%	50V	
C063	1-123-351-00	ELECT	0.47MF	20%	50V	
C064	1-123-380-00	ELECT	1MF	20%	50V	
C065	1-123-381-00	ELECT	2.2MF	20%	50V	
C066	1-123-356-00	ELECT	10MF	20%	50V	
C067	1-123-380-00	ELECT	1MF	20%	50V	
C068	1-102-117-00	CERAMIC	820PF	10%	50V	
C069	1-102-117-00	CERAMIC	820PF	10%	50V	
C070	1-130-483-00	MYLAR	0.01MF	5%	50V	
C071	1-130-483-00	MYLAR	0.01MF	5%	50V	
C072	1-123-369-00	ELECT	4.7MF	20%	50V	
C073	1-123-369-00	ELECT	4.7MF	20%	50V	
C074	1-130-481-00	MYLAR	0.0068MF	5%	50V	
C075	1-130-481-00	MYLAR	0.0068MF	5%	50V	
C076	1-130-479-00	MYLAR	0.0047MF	5%	50V	
C077	1-130-479-00	MYLAR	0.0047MF	5%	50V	
C078	1-130-481-00	MYLAR	0.0068MF	5%	50V	
C079	1-130-481-00	MYLAR	0.0068MF	5%	50V	
C080	1-123-380-00	ELECT	1MF	20%	50V	
C081	1-123-356-00	ELECT	10MF	20%	50V	
C082	1-102-978-00	CERAMIC	220PF	5%	50V	
C083	1-101-005-00	CERAMIC	0.022MF		50V	
C085	1-101-005-00	CERAMIC	0.022MF		50V	
C086	1-130-632-00	FILM	0.1MF	5%	50V	
CF001	1-527-836-00	FILTER, CERAMIC				
CF002	1-527-836-00	FILTER, CERAMIC				
CFU001	1-404-251-00	TRANSFORMER, IF				
♠CNP001	;1-564-113-11	PIN, CONNECTOR 4P				
CT003	1-141-138-XX	CAP, TRIMMER 8PF				
CT004	1-141-138-XX	CAP, TRIMMER 8PF				
CT005	1-141-138-XX	CAP TRIMMER 8PF				
CT006	1-141-138-XX	CAP, TRIMMER 8PF				
D001	8-719-815-55	DIODE 1S1555				
D002	8-719-903-49	DIODE SLH54PC3				
D003	8-719-907-78	DIODE PR5534S				
D004	8-719-815-55	DIODE 1S1555				
FE101	1-463-405-00	FRONT END				
IC001	8-751-680-02	IC CX-168-2				
IC002	8-759-833-90	IC LA3390				
L004	1-402-037-00	COIL (ANT)				
L005	1-405-999-00	COIL, OSC				
L006	1-404-327-00	TRANSFORMER, DISCRIMINATOR				
L007	1-402-038-00	COIL (ANT)				
L008	1-406-011-00	COIL, OSC (LW)				
L009	1-407-963-00	MICRO INDUCTOR 15MMH				
L010	1-407-963-00	MICRO INDUCTOR 15MMH				
LC001	1-235-046-00	ENCAPSULATED COMPONENT (B.E.F)				
LP001	1-518-526-00	LAMP, PILOT				
Q003	8-729-671-14	TRANSISTOR 2SC710-14				
Q006	8-769-200-40	TRANSISTOR 2SK107-4				
Q007	8-729-245-83	TRANSISTOR 2SC2458				
Q008	8-729-245-83	TRANSISTOR 2SC2458				
Q009	8-729-245-83	TRANSISTOR 2SC2458				
R001	1-246-481-00	CARBON	2.2K	5%	1/4W	
R002	1-246-481-00	CARBON	2.2K	5%	1/4W	
R003	1-246-481-00	CARBON	2.2K	5%	1/4W	
R004	1-246-481-00	CARBON	2.2K	5%	1/4W	
R005	⚠.1-212-958-00	FUSIBLE	10	5%	1/2W	F
R006	⚠.1-212-958-00	FUSIBLE	10	5%	1/2W	F
R008	1-247-819-00	CARBON	330	5%	1/6W	
R009	1-247-879-00	CARBON	100K	5%	1/6W	
R010	1-247-799-00	CARBON	47	5%	1/6W	
R011	1-247-819-00	CARBON	330	5%	1/6W	
R017	1-247-819-00	CARBON	330	5%	1/6W	
R018	1-247-815-00	CARBON	220	5%	1/6W	
R019	1-247-855-00	CARBON	10K	5%	1/6W	
R020	1-246-489-00	CARBON	4.7K	5%	1/4W	
R021	1-247-819-00	CARBON	330	5%	1/6W	
R023	1-247-849-00	CARBON	5.6K	5%	1/6W	
R024	1-247-879-00	CARBON	100K	5%	1/6W	
R025	1-247-837-00	CARBON	1.8K	5%	1/6W	
R026	1-247-835-00	CARBON	1.5K	5%	1/6W	
R027	1-247-853-00	CARBON	8.2K	5%	1/6W	
R028	1-247-849-00	CARBON	5.6K	5%	1/6W	
R029	1-247-839-00	CARBON	2.2K	5%	1/6W	
R030	1-247-847-00	CARBON	4.7K	5%	1/6W	
R031	1-247-847-00	CARBON	4.7K	5%	1/6W	

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R032 ⚠	1-212-869-00	FUSIBLE	33	5%	1/4W	F
R033 ⚠	1-212-869-00	FUSIBLE	33	5%	1/4W	F
R034	1-247-839-00	CARBON	2.2K	5%	1/6W	
R035 ⚠	1-212-857-00	FUSIBLE	10	5%	1/4W	F
R036	1-247-859-00	CARBON	15K	5%	1/6W	
R037	1-247-879-00	CARBON	100K	5%	1/6W	
R038	1-247-873-00	CARBON	56K	5%	1/6W	
R039	1-247-873-00	CARBON	56K	5%	1/6W	
R040	1-247-867-00	CARBON	33K	5%	1/6W	
R041	1-247-863-00	CARBON	22K	5%	1/6W	
R042	1-247-831-00	CARBON	1K	5%	1/6W	
R043	1-247-867-00	CARBON	33K	5%	1/6W	
R044	1-247-847-00	CARBON	4.7K	5%	1/6W	
R045	1-247-873-00	CARBON	56K	5%	1/6W	
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R047	1-247-855-00	CARBON	10K	5%	1/6W	
R048	1-247-855-00	CARBON	10K	5%	1/6W	
R049	1-247-831-00	CARBON	1K	5%	1/6W	
R050	1-246-473-00	CARBON	1K	5%	1/4W	
R051	1-247-887-00	CARBON	220K	5%	1/6W	
R052	1-247-877-00	CARBON	82K	5%	1/6W	
R053	1-247-877-00	CARBON	82K	5%	1/6W	
R054	1-247-831-00	CARBON	1K	5%	1/6W	
R055	1-247-831-00	CARBON	1K	5%	1/6W	
R056	1-247-783-00	CARBON	10	5%	1/6W	
R057	1-247-783-00	CARBON	10	5%	1/6W	
R058	1-247-863-00	CARBON	22K	5%	1/6W	
R059	1-247-863-00	CARBON	22K	5%	1/6W	
R060	1-247-841-00	CARBON	2.7K	5%	1/6W	
R061	1-247-841-00	CARBON	2.7K	5%	1/6W	
R062	1-247-825-00	CARBON	560	5%	1/6W	
R065	1-247-831-00	CARBON	1K	5%	1/6W	
RV001	1-226-236-00	RES, ADJ, CARBON 10K				
RV002	1-226-238-00	RES, ADJ, CARBON 50K				
S001	1-554-526-00	SWITCH, ROTARY SLIDE				
S002	1-554-431-00	SWITCH, PUSH (1 KEY)				

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